April 1958

Brick & Clay Record

LEADING CLAY JOURNAL OF THE WORLD

BRICK • REFRACTORIES • STRUCTURAL TILE • SEWER PIPE • DRAIN TILE • TERRA COTTA • ROOFING TILE • CLAY AGGREGATE

B & CR EXCLUSIVE
OUR INDUSTRY'S FUTURE

SPECIAL SECTION
MINUTE MONEY MAKERS

NEW PLANTS IN PICTURES
HARBISON-WALKER
GLADDING, McBEAN

TARGET.... FOR TODAY AND TOMORROW

Bonnot Machinery — custom-tailored to your raw material and product needs — incorporates nearly "70 years of built-in integrity of performance" that assures *less down time and reduces maintenance expense* . . . . that adds up to *lowest cost per ton of finished product.* Engineering features such as CONSOLIDATED GEARING, yet with separate clutch controls, for pug mills and augers . . . SUPER GEARING AND BEARINGS . . . BEST PUGGING . . . THOROUGH DEAIRING — *all save trouble and improve production.*

And from Bonnot, your inquiry gets the kind of attention so vital when *present and future* SIGHTS must be concentrated on "more and better brick, tile and pipe."

Rugged Machines for Constant Low Cost Operation — BONNOT'S the Buy

CRUSHERS	CUTTERS	AUGER MACHINES
HAMMER MILLS	REPRESSES	VACUUM MACHINES
DRY PANS	DIES	SPECIAL EXTRUDERS
WET PANS	MIXERS	PUG MILLS
GRINDERS	SPECIAL MACHINES TO ORDER	
FEEDERS	DIRECT FOUNDRY SERVICE	

The BONNOT Co.

CANTON 2, OHIO

cut dryer loss with Additive-A

from Kimberly-Clark

When Additive-A is introduced at the pug mill, dryer loss is reduced because: 1. Clay lubricity is increased, reducing fault-causing stresses and strains and allowing you to extrude a stiffer column. 2. Tempering water is reduced up to 50%—less vapor pressure is generated. 3. Complete drying time is shortened yet reduced breakage and scumming losses are realized.

Here's what else Additive-A will do for you:

- Increase green plastic strength.
- Reduce laminations.
- Improve workability of the clay.
- Increase dry green strength.
- Permit more even temper.
- Extend life of augers, knives, dies and liners.
- Upgrade quality of all ware.

Write for descriptive folder, to: **Kimberly-Clark Corporation** • **NEENAH, WISCONSIN**

CHEMICAL PRODUCTS

"Brick & Clay Record is published monthly by Industrial Publications, Inc., 5 S. Wabash, Chicago 3, Ill. Subscription price: U. S. A. and Canada, $5.00 per year; three years, $10.00; Foreign subscription price: $7.00 per year; three years, $15.00. Vol. 132, No. 4. Entered as Second Class Matter January 2, 1911, at the Post Office at Chicago, Ill., under the Act of March 3, 1879. Additional entry at Pontiac, Ill.

SAVED

BY 2¾¢ WORTH OF

Super #3000

REFRACTORY BONDING MORTAR

BROKEN ENDS of this car top tile were "buttered" with Super #3000 and pressed together. After the mortar had set, the tile was as good as new—ready for immediate service. Cost of the Super #3000 for the repair job—about 2¾¢.

Literally thousands of reports attest to the matchless, *almost unbelievable* bonding strength of Super #3000.

In fact, it's been often proved that *Super #3000 is even stronger than the tile, block or brick it bonds.*

Write for illustrated brochure.

R&I

REFRACTORY & INSULATION CORP.

REFRACTORY BONDING AND CASTABLE CEMENTS
INSULATING BLOCK, BLANKETS AND CEMENTS

128 Wall Street, New York 5, N. Y.

"Please say I saw it in B&CR"

LETTERS To the Editor

Des Moines Promotion

Ed. Note: In the news pages this month we feature a story on a promotion done in Des Moines recently by Des Moines Brick & Supply Co. In a long letter, giving us this information, many other interesting points were brought out by Guy G. Zarley, Des Moines B&S president. We thought these of such interest as to warrant printing the below excerpts concerning the Home Show promotions done in that area.

Editor, BRICK & CLAY RECORD:—(One of your editors) also expressed interest in our local promotion for a Brick Home Show to be held during the period of June 8 through 15th. . . . While chairman of the advertising and promotion committee of Region 6, SCPI, several years ago, it was our committee project to formulate the planning for the Minneapolis Brick Show Home, which since has been favorably recognized by the Washington office of SCPI under Al Walsh.

In the fall of 1956, we took steps towards promoting a Des Moines Brick Show Home and enlisted the help and cooperation of the Des Moines manufacturers and brick and clay suppliers.

Our objectives were these: to demonstrate to the home builder our interest in his selling homes built with brick, and to show him that our interest was greater than just actually making a sale to him.

We added emphasis to this point by the fact that the timing of the program came early enough in the spring to give selling impetus to the homes completed on early spring starts . . . another objective was to drive home the value and desirability of brick construction to the general public. . . .

This program went over very well and we had 26 builders and 26 brick homes in the project. With the experience of last year's promotion we have collectively signed builder-sup-

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Brick & Clay Record

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We asked our readers what they thought of business in 1958 and the future . . . about research, promotion, advertising, new products, colors and other important facets of our industry.

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Three New Plants—
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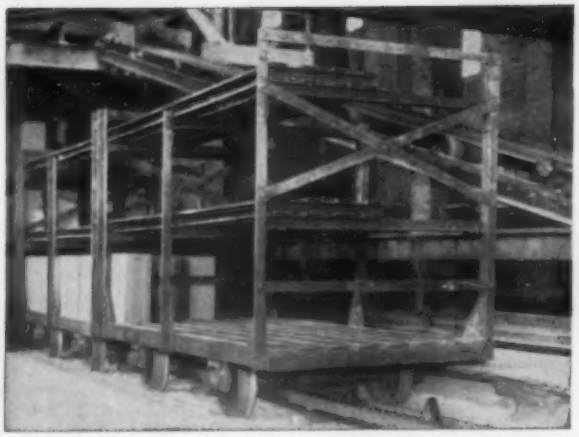
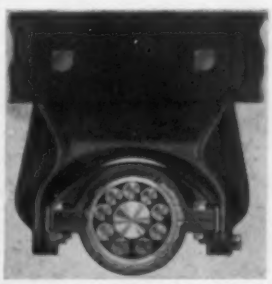


Dryer cars at Jenkins Brick Co., Montgomery, Alabama

Dryer Cars by Chase



DUST PROOF OIL RETAINING BOXINGS, keep bearings free from grit and sand.

FLEXIBILITY OF BOXING takes care of irregularities in the track, car frame, or bent axles without increased friction.

All dryer cars, single, double, and triple deck, are equipped with patented Chase bearings. These are dust proof, oil retaining, flexible boxing with roller bearings. Note also the renewable steel liner and heavy, strong construction of our bracket and boxing. For 15 years' service, order Chase cars with Chase bearings.

Write Now

Chase
INDUSTRIAL CAR AND TRUCK BUILDERS
FOR OVER FIFTY YEARS
FOUNDRY & MANUFACTURING CO.
2300 PARSONS AVENUE • COLUMBUS 7, OHIO

MOST MODERN clay products producers use SUPERLITE UNLOADERS

COLUMBIA BRICK & TILE CO., COLUMBIA, S. CAROLINA

One of the newest and most modern of all, operates

16 SUPERLITE UNLOADERS

Handling their high quality, high volume production, faster, more economically, with protection of high quality always.

YOU CAN ENJOY

THE ADVANTAGES OF

FAST-GENTLE HANDLING!

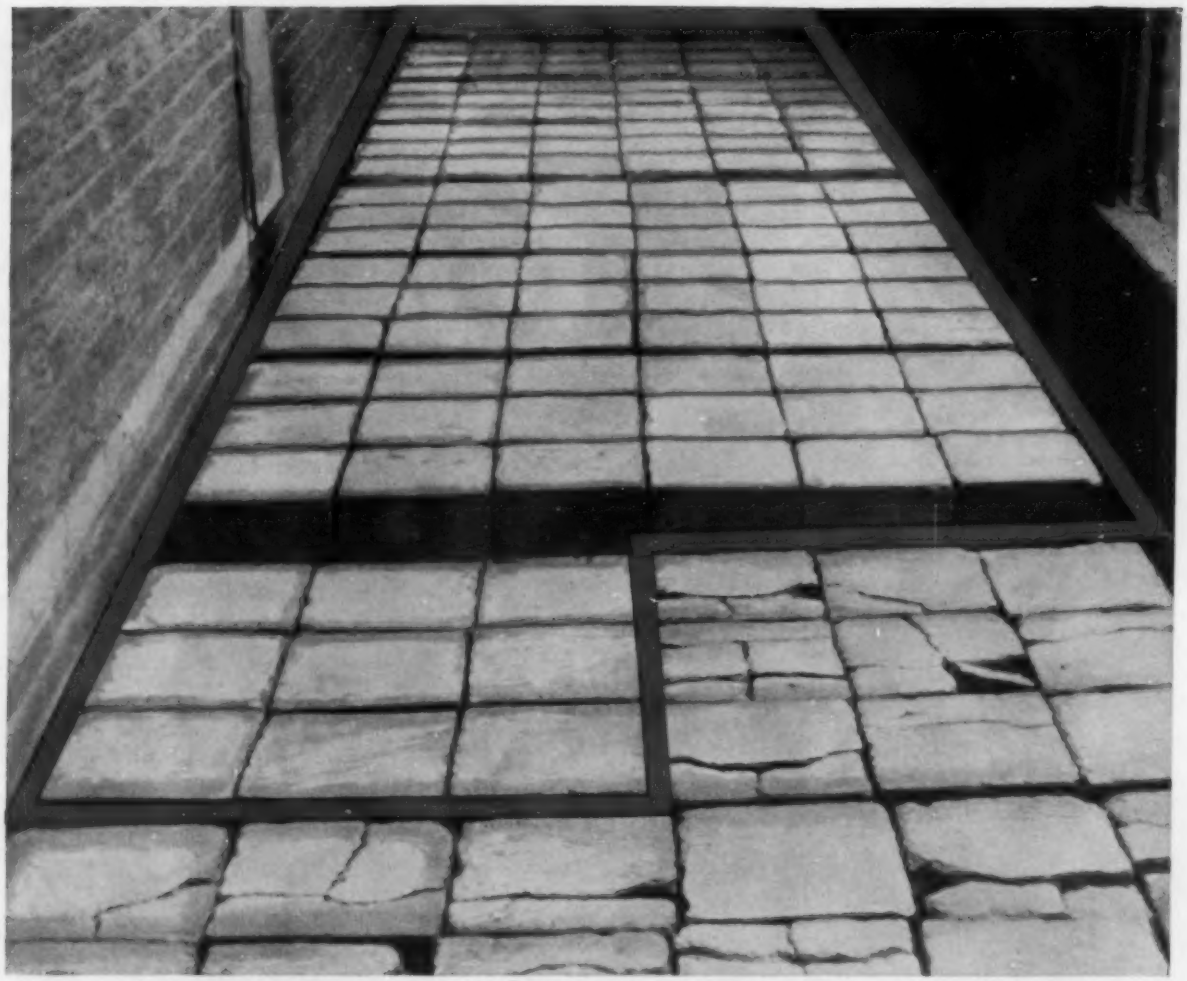
BUILDERS EQUIPMENT COMPANY

3810 NORTH CENTRAL AVENUE — PHOENIX, ARIZONA

WRITE — WIRE OR TELEPHONE FOR COMPLETE INFORMATION

COLLECT CALLS ACCEPTED — CRestwood 4-8321

Superlite Unloaders DON'T COST — THEY SAVE!



CAR BLOCK LIFE INCREASED MORE THAN 200%. Illustration shows conventional car blocks (foreground) after only one year of service. Compare their condition with that of Remmey SKC car blocks (outlined in red) after three years on the same operation.

REMMEY SKC CAR BLOCKS

give triple the life of conventional blocks

A leading manufacturer of building brick found that conventional car blocks cracked and crumbled in six months and had a useful life of only one year. Replacements were expensive and necessitated inconvenient shut-downs.

Dissatisfied, the manufacturer switched to Remmey blocks. Company records prove that the Remmey SKC car blocks shown here lasted more than 200% longer without cracking or spalling. They have been in continuous use for more than three years and show little sign of wear.

Possessing an extremely low coefficient of thermal expansion, Remmey SKC blocks have greater resistance to thermal spalling, especially during fast firing cycles up to cone 12 (2435°F). In addition, their considerably greater strength results in improved resistance to mechanical abuse.

Why be plagued with high car block replacement expense? To cut production costs, call on Remmey for superior quality car blocks. Richard C. Remmey Son Co., 400 Hedley Street, Philadelphia 37, Penna.

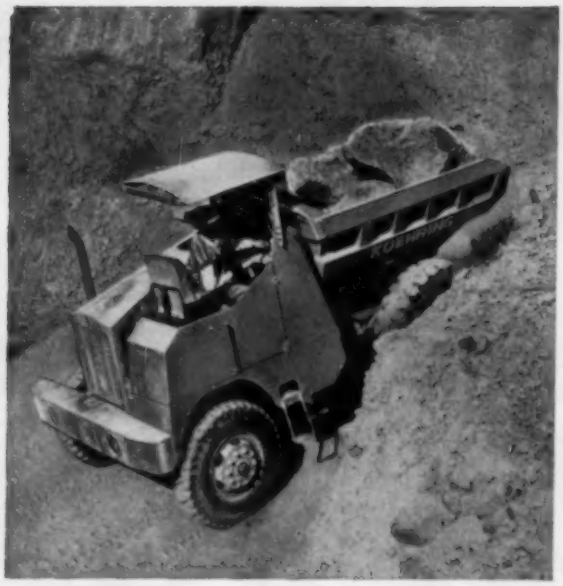
MANUFACTURERS OF SPECIALIZED REFRACTORIES . . . REMMEY

A SUBSIDIARY OF A. P. GREEN FIRE BRICK COMPANY

MINING WITH DUMPTORS

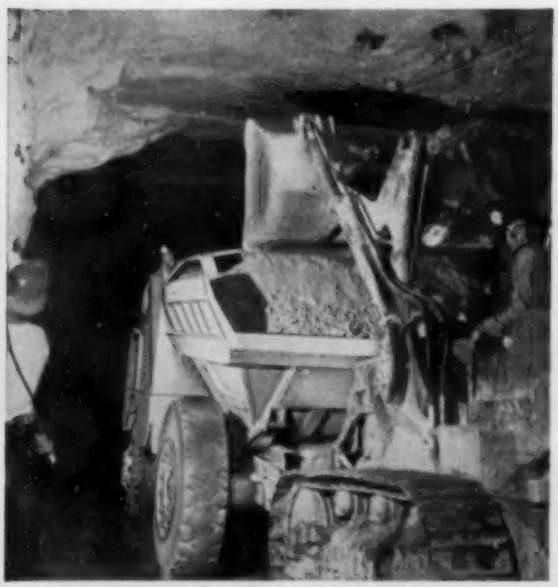
...in open pits...and underground

Follow Koehring Dumptor through a typical load-haul-dump cycle, and you'll quickly see why it has gained such wide acceptance on all kinds of mine hauling, stockpiling, feeding hoppers, etc. First, notice how it saves time at the loader (above). Wide-flared 6-yard body, with low height, provides a big square target — *64 square feet, to be exact* — for loading over either side or end by shovel, dragline or front-end loader. On the haul, Dumptor travels at the same speeds in either direction. *There's no need to turn* — an important advantage when working along narrow ledges, overhead trestles, tunnels, etc. It accelerates fast, climbs 24% ramps or grades with capacity load. That's because there's better than 6 H.P. of *"go"* for every ton of loaded weight. At the dump area, *gravity* tilts the body, dumps the load *in one second*. There's no 15 to 25-second wait for slow-acting mechanical body-hoist — and no expensive hoist maintenance, because *gravity-dump* never balks, never wears out. You get all these advantages *and more* when you haul with heavy-duty Dumptors. See your local Koehring distributor about a demonstration, or write to us for the latest Dumptor® catalog.



Up-grade all the way — Near Mexico, D.F., 3 Dumptors haul rock and sand 600 feet up-hill from mine to hopper. In spite of steep, winding road, and normal loading delays, each Dumptor averages 150 loads per 12-hour day. These heavy-duty, 6-yard haulers, with their high ratio of H.P.-to-weight, can climb mine grades as steep as 24% fully loaded.

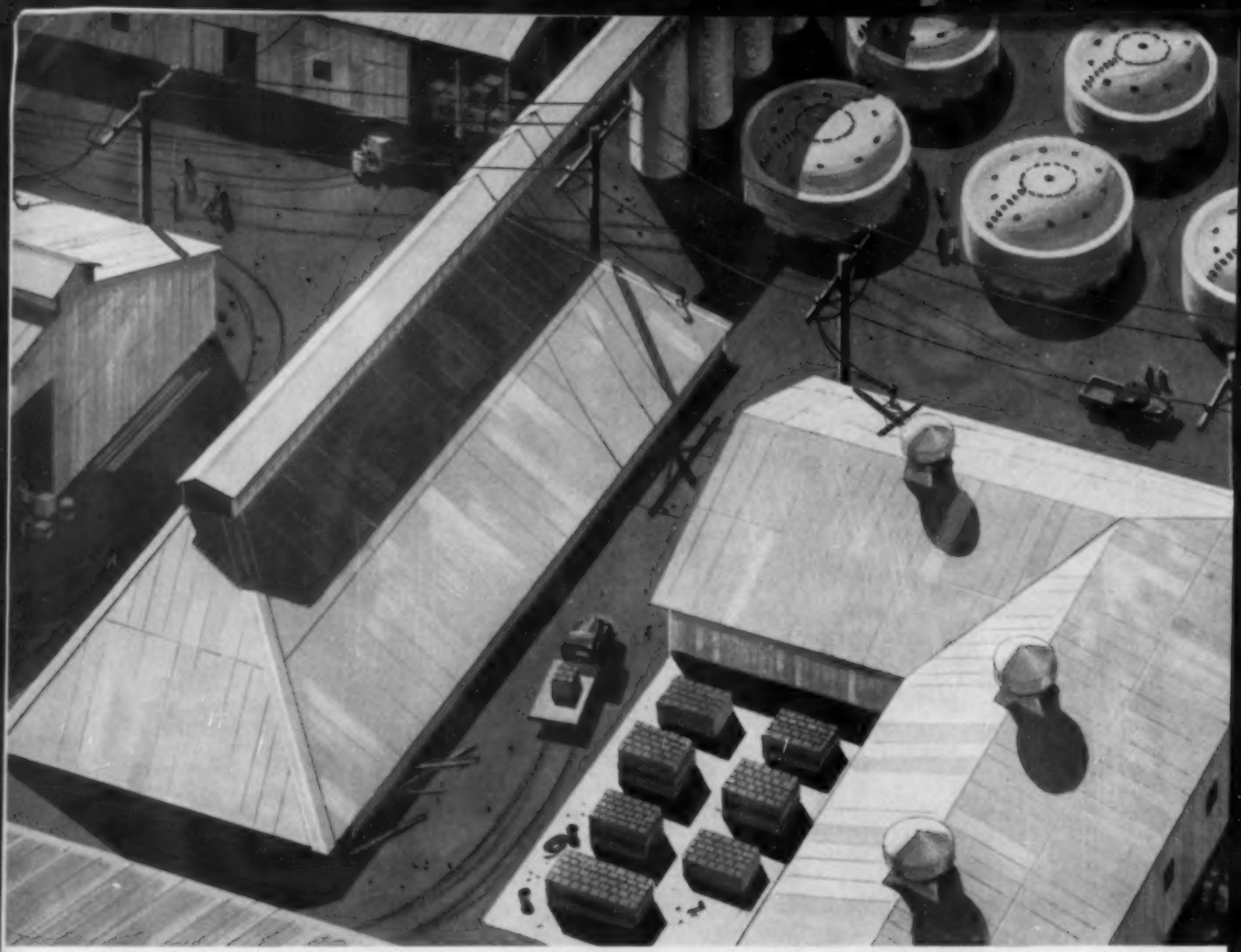
Dump time: 1 second — At hillside hopper, Dumptor drives up, body forward. Operator trips a body-release lever, and *gravity* tilts the body — dumps the load instantly. Free-swinging kick-out pan breaks load suction for fast, clean dump when hauling wet, sticky materials — bolts down to floor of dump body when handling heavy boulders like this.



Shuttles underground — There's no room to turn in this mine tunnel, and no need to turn. Koehring Dumptor drives up, gets its load, then shuttles back out of tunnel at the same speed as it entered. It operates with equal ease and speed in either direction — is as efficient underground as it is on inclined ramps, overhead trestles, or hauling on the surface.

An inside job — To save rehandling of materials, 2 Dumptors haul clay from pit to processing plant, dump directly into hoppers inside the plant. Convenient end-dump, and no-turn shuttle hauling are especially practical on operations like this, eliminate turning and spotting in crowded work-areas. Handy, too, for stockpiling, and loading rail cars.

KOEHRING DIVISION OF KOEHRING COMPANY • Milwaukee 16, Wis.



A KAISER ALUMINUM ROOFING & SIDING SHEET TO SUIT YOUR NEEDS

Ribbed Siding

Thickness: 0.032" and 0.040"
Length: 5' to 22' in 6" increments and 22' 6"
Width: 42½" overall
Rib Configuration: 1" deep — 6" and 8" pitch
Finish: Plain or Embossed

Also available with rib configuration 1½" deep — 5.33" pitch. Sheet thickness 0.032". Lengths 5' to 12' in 6" increments. Other specifications on request.

V-Seam Roofing & Siding

Thickness: 0.040" and 0.051"
Length: 5' to 22' in 6" increments and 22' 6"
Width: 41½" overall
V Configuration: 1½" deep — 4½" pitch
Finish: Plain or Embossed

Industrial Corrugated Roofing & Siding

Thickness: 0.024" and 0.032"
Length: 5' to 12' in 6" increments
Siding Width: 33¾" and 42½" overall
Roofing Width: 35" and 48¾" overall
Corrugation: ⅞" deep — 2.67" pitch
Finish: Plain Mill and Stucco Embossed

Flat Sheet Roofing & Siding

Thickness: 0.024" and 0.032"
Finish: Plain Mill and Stucco Embossed

Full specifications on request.

NOTE: Kaiser Aluminum also offers a complete selection of flashing sheet, formed flashing, closures and other accessory building items.

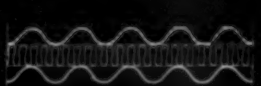
NEW! INSULATED ALUMINUM "SANDWICH" WALLS

Choose From These and Other Sandwich Combinations

Inner Skin: 0.024" Industrial Corrugated Siding
Outer Skin: 0.032" Ribbed Siding—5.33" pitch

Inner Skin: 0.024" Industrial Corrugated Siding
Outer Skin: 0.032" Ribbed Siding — 4" pitch

Inner Skin: 0.024" Industrial Corrugated Siding
Outer Skin: 0.032" Ribbed Siding — 8" pitch



Inner Skin: 0.024" Industrial Corrugated Siding
Outer Skin: 0.032" Industrial Corrugated Siding

Before you build or modernize your brick plant

CONSIDER THESE THREE COST-SAVING ADVANTAGES OF KAISER ALUMINUM ROOFING & SIDING SHEET

1. Light Weight (about ⅛ the weight of steel) — to save you big money on labor, handling and construction time—*and* eliminate the need for heavy, expensive supporting structurals!

2. Corrosion Resistance (and they're rustproof, too) — to do away with the necessity of spending costly upkeep dollars on painting and other care.

3. Strength & Durability — with the added benefit of a distinctive heat-reflective, maintenance-free surface—to make your new building the most functionally attractive you've ever known!

80,000 SQUARE FEET COVERED AT BIG SAVINGS!

"In our business you've got to build *big*," says Mr. Dan C. Sill of his spacious new Kern Rock Company building in Bakersfield, California.

"But Kaiser Aluminum Industrial Roofing sheets have helped bring us outstanding service at remarkably low cost. We are especially pleased with our savings in both labor and material.

"The sheets we used measure 48 inches wide and .024 inches thick, with a 7/8-inch corrugation. These specifications allowed us to employ five-foot purlin spacing spans, figuring 45 pounds per square foot uniform loading based on a safety factor of two.

"Also, our maintenance costs are way down because the aluminum will never rust . . . will never need painting or expensive care.

"In fact, we're so completely satisfied that we have recently put up a similar 68,000 square foot building. Of course, we used Kaiser Aluminum Industrial Roofing."

There's never been anything so ideally suited for kiln buildings, clay storage, stock sheds and other large structures as Kaiser Aluminum's full line of industrial building products.

For A.I.A. File and full information, contact the Kaiser Aluminum sales office listed in your telephone directory. Or write Kaiser Aluminum & Chemical Sales, Inc., *General Sales Office*, Palmolive Bldg., Chicago 11, Ill.; *Executive Office*, Kaiser Bldg., Oakland 12, Calif.

KAISER ALUMINUM

THE BRIGHT STAR OF METALS

See "MAVERICK," Sunday evenings, ABC-TV Network. Consult your local TV listing.

HARROP put the heat on the clay from Malay...

You might say this four cubic inches of clay was given "the third degree" — except that we actually gave it 1900 degrees, Fahrenheit, in one of our test kilns.

And..."it talked"...told us plenty!

We learned its drying and firing shrinkage, color variation and its porosity . . . and much other "inside information" that enabled us to intelligently recommend proper dryer and kiln installation for the company in Singapore, Malay Straits.

That's just a fraction of the degree we go to at Harrop to give our customers the equipment they can profit by. No matter where in the world you are, we'd be pleased to give non-obligating consultation to your problem.

HARROP

Harrop Ceramic Service Co.

35 EAST GAY STREET — COLUMBUS 15, OHIO

British Associate: British Ceramic Service Co., Ltd. Bricesco House, Stoke-on-Trent, England

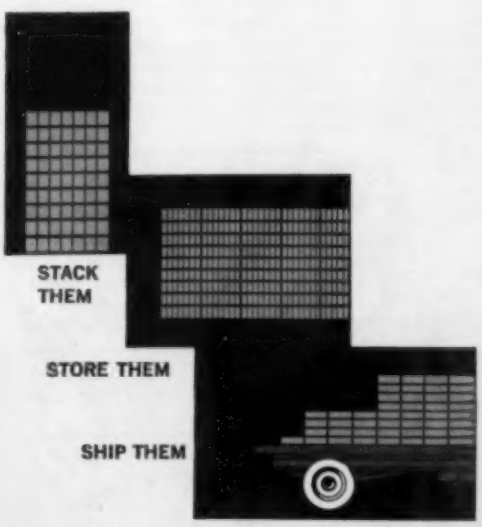
Harrop Electric Furnace Division, 3470 E. Fifth Ave., Columbus 19, Ohio . . . Laboratory, Industrial and School Furnaces.

Practical ceramic engineering put profitably to work in

TUNNEL KILNS • DRYERS • PLANT DESIGN

CUSHIONING WITH CORRUGATED

MEANS LOWER SHIPPING LOSSES



Corrugated paper Bricartons eliminate call-backs and shipping losses...cut handling costs...help in palletizing. And they make a good impression on your customers, help build your business. Bricartons are available in sizes for all brick, tile, terra cotta and refractory brick. Complete information on sizes and deliveries promptly upon request. Write Canton Corrugated Box Company, 2820 Winfield Way, N.E., Canton 5, Ohio, Glendale 3-0151.

CANTON CORRUGATED BOX COMPANY
Division of St. Regis Paper Company

MATERIALS EQUIPMENT SERVICES

KAISER BUILDINGS — Three big advantages of Kaiser Aluminum in buildings are reported to be light weight, corrosion resistance and srtength. Several types of aluminum and several roofing and siding sheets are available to meet your needs. Kaiser Aluminum Co.

200/Circle on Reader's Service Coupon

KOEHRING EXCAVATORS — New addition to the line is a model named 805; has heavy duty 2-yard capacity with 25' shovel boom and 18½' dual dipper sticks. Unit handles 2 to 3 yard dragline bucket; lifts up to 52 tons. Koehring Co., Milwaukee, Wis.

201/Circle on Reader's Service Coupon

BONNOT — Machinery is engineered to your local plant requirements; use of NiHard and other iron alloys provides quality wearing parts and long service; Bonnot engineers will help you overcome your particular problems. Bonnot Co., Canton 2, Ohio.

202/Circle on Reader's Service Coupon

GREEN STRENGTH—Can be increased with use of Additive-A. In addition to greater green strength, this new product can permit reduction of tempering water; cut dryer loss; reduce lamination; improve workability; extend auger life; help control scumming, manufacturer reports. Kimberly-Clark Corp., Neenah, Wis.

203/Circle on Reader's Service Coupon

FEEDER TABLE—Units by Hewitt-Robins have averaged only 68c per year for spare parts, per unit. Jones Feeder Table can provide uniform supply of material from unit designed for long life, low maintenance. Hewitt-Robins, Stamford, Conn.

204/Circle on Reader's Service Coupon

SPLIT LOADS — With use of Pack-Hauler you can deliver three separate loads of brick to three different locations, all from one initial loading, without need for strapping. American Truck & Body Corp., Martinsville, Va.

205/Circle on Reader's Service Coupon

RIGID FRAME — and prefabricated pipe structures are available from Varner with rigid frame clear spans of from 32' to 70' and up; pipe construction adaptable to your individual needs. R. G. Varner Steel Products, Inc., Pine Bluff, Ark.

206/Circle on Reader's Service Coupon

DRY PRESS DRIVE—Multi-Speed dry press drive is reported to give more brick of higher density and more uniform quality. Unit can help increase density, eliminate many of the air voids, help reduce segregation in the mold box. Ortruc, Inc., St. Louis, Mo.

207/Circle on Reader's Service Coupon

F-R-H MACHINES—One of these is producing 66 million brick per year for Marion Brick Corp., producing extra hard, uniform columns of clay. You can keep your machine operating at top efficiency with F-R-H replacement parts. Fate-Root-Heath Co., Plymouth, Ohio.

208/Circle on Reader's Service Coupon

CHEMICALS — Polyfon is claimed to increase dry strength 103%—0.4% Polyfon is said to increase dry modulus of rupture from 350 to 710 pounds per square inch, give greater uniformity, reduce lamination and keep product non-sticky. West Va. Pulp and Paper Co., Charleston A, S.C.

209/Circle on Reader's Service Coupon

CUTTERS—Platens for brick or tile are built at any level for optimum wire cutting angles. All are quick-change units that do not disturb the alignment of reel and gear assembly. Maximum brick: 27 per cut. Maximum tile: 5 12" pieces. Chambers Bros. Co., 52nd & Media Sts., Philadelphia 31, Pa.

210/Circle on Reader's Service Coupon

EXCAVATORS — You can cut costs in stripping and loading through more output, steady operation with little maintenance trouble, and ample strength with Bucyrus-Erie's 38-B. Bucyrus-Erie Co., So. Milwaukee, Wisc.

211/Circle on Reader's Service Coupon

COAL—Baltimore & Ohio Railroad coal traffic representatives can help you discover the most efficient low-cost bituminous coal for your particular requirements. Coal Traffic Dept., B&O Railroad, Baltimore 1, Md.

212/Circle on Reader's Service Coupon

HARDFACING—Dixie Fire Brick Co., of Kimberly, Ala., recently set up the following hardfacing program with help from Stoody Co.: 60" muller tires, 3" thick with a 12" face—finished with a pass of Stoody 21; augers, shredders, sealing dies, spacing rings, and paddles of the extruding machine—with other Stoody alloys. Stoody Co., 11937 E. Slauson Ave., Whittier, Calif.

213/Circle on Reader's Service Coupon

HAMMERMILLS — Miller rotors throw particle against particle; material helps to pulverize itself. Double rotor hammermills have replaceable manganese steel hammers and tips. 50 and 100 ton capacities. Miller Equipment Co., P.O. Box 1566, Salisbury, N.C.

214/Circle on Reader's Service Coupon

VACUUM PUGMILL—Compactness of a combined machine plus the economy and versatility of separate drives are features of Steele machines; can be made with open pugmill or vacuum pugmill; fed by 50°F. pug sealer in an in-line position or at right angles. J. C. Steele & Sons, Statesville, N. C.

215/Circle on Reader's Service Coupon

CONES—Plaques of Orton cones placed throughout the setting provide an accurate check on firing conditions during the critical high fire stage. Write for the Temperature Equivalent Table and the free 56 page booklet Properties and Uses of Pyrometric Cones. Edward Orton Jr., Ceramic Foundation, Columbus 1, Ohio.

216/Circle on Reader's Service Coupon

SCREENS — Screen sections of Tyler Woven Wire are fabricated for all makes of vibrating screens in any mesh or metal. They are made up with hook-strip or bent-edge construction to suit the machine on which they are to be used. They make possible stretching and maintaining the screens at drum-head tension. The W. S. Tyler Co. Cleveland 14, Ohio.

217/Circle on Reader's Service Coupon

ELECTRODES — Due to reported high abrasion resistance the Super HF-20 electrodes for hardfacnig have increased service life of the built-up hammers and the mill housing itself has been doubled. HF-20 electrodes are stated to cost about 40% less than the type previously used. Available from stock in 3/16" diameter, to handle hardfacing jobs of almost any size. American Manganese Steel Div., Chicago, Ill.

218/Circle on Reader's Service Coupon

FORK-LIFT TRUCKS — The latest Towmotor models offer functional engineering, simplified dual entry compartment, full traction weight distribution, off-center visibility and centralized control, and precision steering. Towmotor Co., Cleveland 10, Ohio.

219/Circle on Reader's Service Coupon

VIBRATING SCREENS — Whether its scalping, separating, sizing, coarse screening and deeding of basic materials, control of particle size in processing quality materials or reclaiming waste materials for re-use, Syntron can provide an answer. Syntron builds 5 different types of screens in a wide range of sizes—single, double or triple deck models. Syntron Co., Homer City, Pa.

220/Circle on Reader's Service Coupon

KILN CARS—can be moved easily with the Gravely LS Tractor. Low speed, 5 HP, yet powerful enough to move loaded cars up to 310,000 lbs. Gravely Tractors Inc., Box 65, Dunbar, W. Va.

221/Circle on Reader's Service Coupon

DRYER—Good oxidation and cooling control permits dense loading with freedom from cores or air checking. Additional operating advantages include controlled heat penetration by adjustable orifice burners, using multi-burner principle and underdeck firing, providing uniform shrinkage and eliminating danger of wrecks caused by "Hot spots." Swindell-Dressler Corp., Pittsburgh 30, Pa.

222/Circle on Reader's Service Coupon

REFRACTORIES — Pyro has improved quality refractories specifically designed to longer, more efficient service. These products are strong, have greater resistance to thermal shock, exceptional stability under load at high temperatures, fulfill many of the requirements of diversified kiln operations, and require minimum maintenance. Pyro Refractories Co., Oak Hill, Ohio.

223/Circle on Reader's Service Coupon

DUST LOADING — Designed for industrial service, the new Buffalo type CR Fan has a desirable balance of efficiency and resistance to abrasion. The housing is streamlined from its smooth inlet bell to gradually diverging outlet — providing maximum static efficiency with reduced housing wear because of the minimized turbulence. The blades are radial at the tip to meet the air at the correct angle of attack. Buffalo Forge Co., Buffalo, New York.

224/Circle on Reader's Service Coupon

HAMMER MILLS—Regardless of the size of the reduction, Williams has a hammer mill designed to crush, grind or shred, in one single operation. More uniform product, increased output, plus savings in time and labor can cut production costs as much as half. The units are said to reduce production costs up to 50%, and saves up to 75% on equipment costs. Williams Patent Crusher & Pulverizer Co., St. Louis 6, Mo.

225/Circle on Reader's Service Coupon

BRICK FORKS — This was said about Bickerstaff Brick forks: ". . . We find a saving of several thousand dollars because we do not require a large inventory of wood pallets . . . using a side shifter, we can make a better load on the truck for shipping. We can stack the brick tighter, and in better condition. . . ." Bickerstaff, Inc., Columbus, Ga.

226/Circle on Reader's Service Coupon

OPACIFIERS—TAM zirconium opacifiers, each have their own advantages in producing opacity color uniformity or modification, texture control, efficiency and economy. Company reports purity and particle size are of high standards. Titanium Alloy Mfg. Div., New York, N. Y.

130/Circle on Reader's Service Coupon

227/Circle on Reader's Service Coupon

COLOR BRICK—Thinking of color? Write Ferro, describing your equipment, firing ranges, type of clay and proposed method of applying color. Ferro makes colors for glazing, body staining, engobe, and sandblasting. Ferro Corp., Color Div., 4150 E. 56th St., Cleveland 5, Ohio.

228/Circle on Reader's Service Coupon

SCREENS—A new electrical screen-heating arrangement is reported to boost output by as much as 50% with open mesh, and produce a better, more uniform product. Write for Book 2377-A. Link-Belt Co., Prudential Plaza, Chicago 1, Ill.

229/Circle on Reader's Service Coupon

HARDSURFACING — Abrasoweld and Feceweld can handle 9 out of 10 hard surfacing jobs yet is reported to cost less to buy. For hardsurfacing of muller knives, conveyor worms, crusher rolls, shafts. For severe impact and moderate abrasion, use Abrasoweld; for severe abrasion and moderate impact, Faceweld. Lincoln Electric Co., Cleveland 17, Ohio.

230/Circle on Reader's Service Coupon

TRUCK CRANE—Handles brick or block unpalleted or palleted or packaged, unloading off either side of the truck. Driver alone can unload truck. Unit supplied ready to mount on your trailer. Bradney Machine Co., Inc., Middleton, N. Y.

231/Circle on Reader's Service Coupon

How to Get Rush Information

If you want further information or literature describing the products in this special feature, just use the handy card you will find on page 18. Our Reader's Service Dept. will see that you obtain the requested information as quickly as possible.

GRADERS — Adams 660 standard blade extends a full 7½ ft. beyond wheel line, to give operator safe working margin. Extra-safe dual-braking system stops transmission as well as tandem drive wheels for sure, safe stops and minimum brake wear. Wide range of speeds give Adams advantage for working efficiently in any kind of material. All 80 to 150 hp Adams graders have 8 forward and 4 reverse speed transmission. LeTourneau-Westinghouse Co., Peoria, Ill.

232/Circle on Reader's Service Coupon

HAMMERMILL — One manufacturer reportedly paid for his American Hammermill in less than six months' operation at the current market price of Haydite, by crushing culled Haydite blocks into reusable material. American Pulverizer Co., 1061 Macklind Ave., St. Louis 10, Mo.

233/Circle on Reader's Service Coupon

KILN CARS—McNally Pitt built to your specifications with special heat-resisting iron, properly stress relieved. No lubricant is needed on cold rolled steel axles which are cleaned by compressed air. McNally Pittsburg Mfg. Corp., Pittsburg, Kan.

234/Circle on Reader's Service Coupon

POLY-V DRIVE—A totally new concept of power transmission is claimed to deliver up to 50% more power than a conventional V-belt drive of equal width. A single-endless belt with parallel v-ribs runs on sheaves specially designed to mate precisely with belt ribs, giving uniform pull, even load drive over the full sheave width. R/M Poly-V belts have eliminated the matching problems of multiple V-belt drives. Raybestos-Manhattan, Inc., Passaic, N. J. will supply further information.

235/Circle on Reader's Service Coupon

CRAWLER — Koehring 605 has been stripping clay and shale 18 hours a day on one location. Boom lengths on this model range from 50 to 100 feet, drag buckets from 1½ to 2½ cu. yds. Koehring Co., Milwaukee 16, Wis.

236/Circle on Reader's Service Coupon

ENGINEERED AIR HANDLING—to correctly apply fan equipment is offered by Robinson. Get the right fan to do the right job—volume-wise, pressure-wise, construction-wise. Robinson Ventilating Co., Zelienople, Pa.

237/Circle on Reader's Service Coupon

BUILDINGS — Prefabricated pipe kiln buildings, storage buildings, and grinding buildings with steel, aluminum or asbestos covering according to your specifications are offered by Southern Fabricating Inc., Box 97, Staley, N.C.

238/Circle on Reader's Service Coupon

SCREENS—Modern and efficient electric heating equipment. Facts on Universal screens and Unilec heating are available in Catalog No. 150. Universal Vibrating Screen Co., Racine, Wisc.

239/Circle on Reader's Service Coupon

ROCKFACER—Claimed to pay for itself in 90 days, Rockfacer chips a straight edge on your brick, eliminating hammer-and-chisel methods. Machine is said to average 1250 brick per hour. Send a sample of your brick and have it Rockfaced. Rockfacer Co., 503 Hickory Tree Rd., P.O. Box 547, Mesquite, Tex.

240/Circle on Reader's Service Coupon

VIBRATORY FEEDERS—Control your feed rates, matching the efficiency of screens, driers, shredders, mullers and pug mills. Get smooth, even material flow. Electromagnetic principle confines all movement to leaf spring. Syntron Co., 620 Lexington Ave., Homer City, Pa.

241/Circle on Reader's Service Coupon

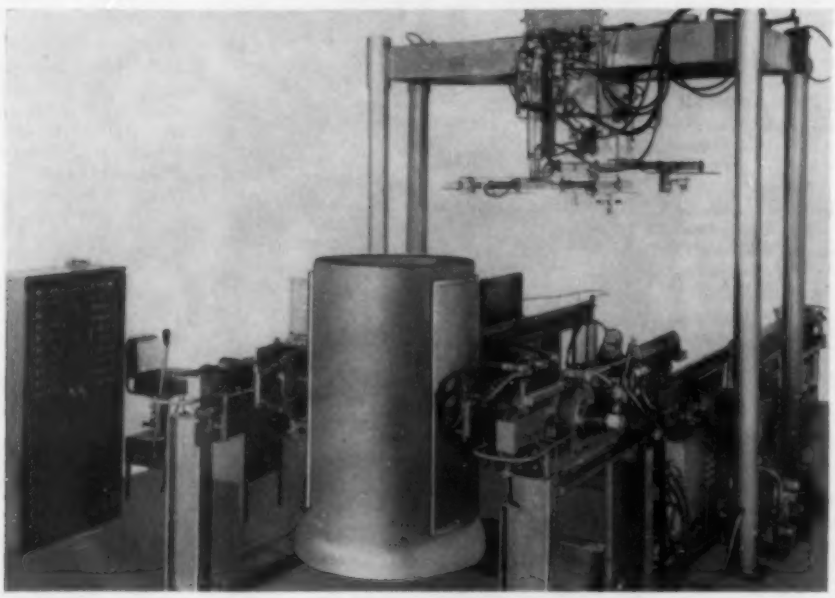
KILN CAR WHEELS — Henderson Clay Products of Henderson, Tex., reports praise for Sanford-Day wheels and bearings. S-D's "Floater" wheel is claimed to remain in perfect alignment, needing no adjustment once bearing nut is tight. Enclosed outer hubs and protected inner hubs reportedly eliminate dust, retain lubricant. Sanford-Day, Knoxville, Tenn.

242/Circle on Reader's Service Coupon

Equipment for the Ceramic Industry

PEARNE AND LACY INC. MACHINE COMPANY

Announcing the new OCTOPUS...



The Pearne and Lacy OCTOPUS has been specifically designed to meet rigid automation requirements in providing a completely automatic operation in the handling and finishing of large sewer pipe. The automatic operating cycle finishes both the Spigot and Bell Ends, turns the pipe over, and places it on the pallet boards ready to be transported to the dryer.

Write now for copy of new Pearne and Lacy catalog just off the press. Complete details on the new Octopus and other major equipment used in the ceramic industry.

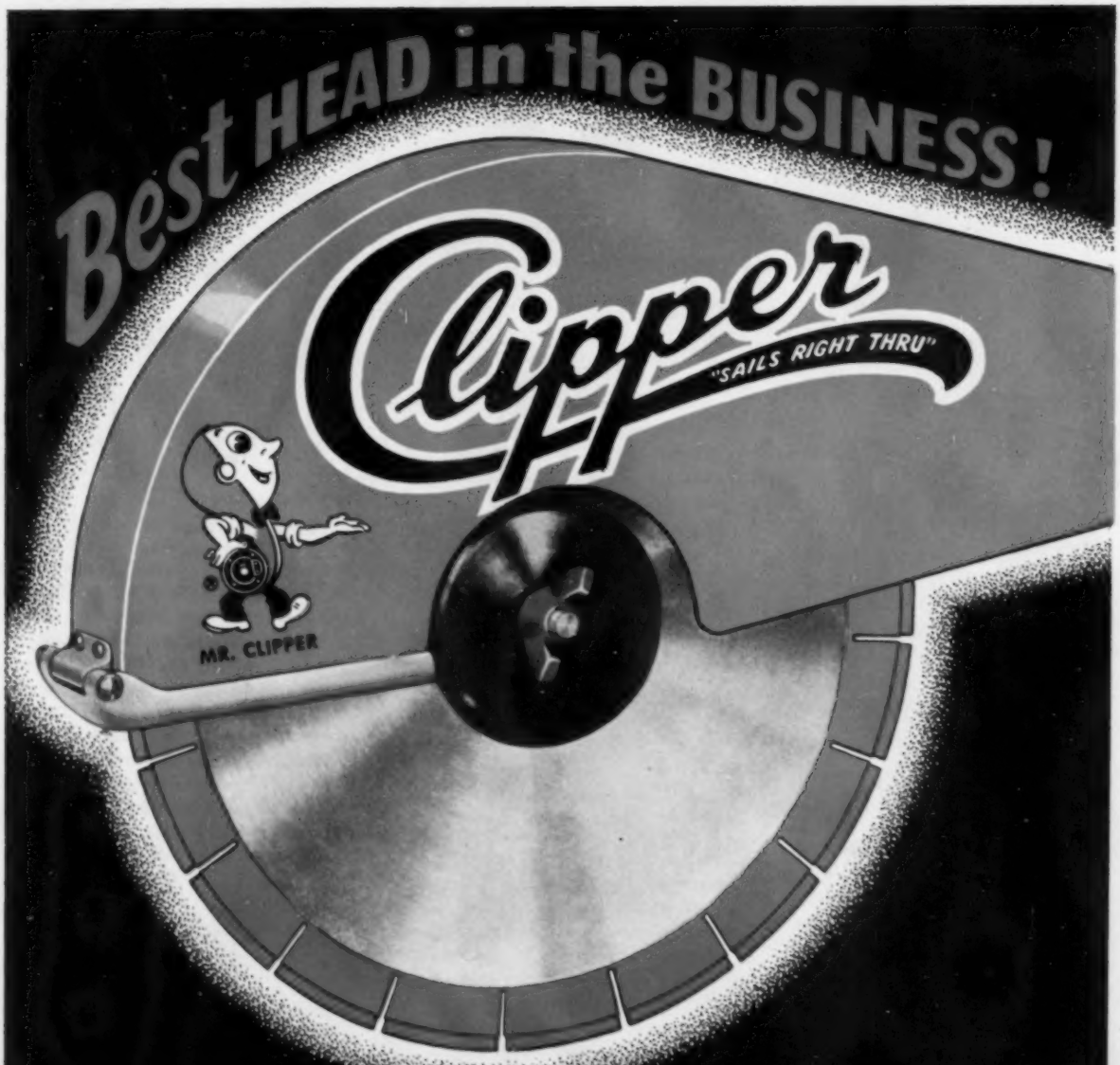
Engineers and Manufacturers of Completely Automatic Handling and Finishing Equipment

We Invite your Inquiry

PEARNE & LACY MACHINE CO., INC.

P. O. Box 3306, Terminal Annex, Los Angeles 54, Calif.

Best HEAD in the BUSINESS!



The Best Head in the Business—That's why 4 out of 5 buy Clipper.

Clipper SUPERMATIC is years ahead with the heavy duty cutting head powered by a specially designed 2 H.P. G.E. motor, and over 30 outstanding features found on no other masonry saw . . . it is engineering leadership by men who know the masonry cutting industry.

SUPERMATIC . . . the only masonry saw in the world with the cutting head you can raise or lower . . . safely . . . quickly . . . from 0" to 17" without turning off the motor. No down time . . . more production time.

Whether cutting wall tile or cement block, the recessed Hi-Lo Control Wheel does everything! You're ready to cut at any height. No Adjustments to Make! No levers or knobs to pull, no slides, gears or unnecessary parts to wear out.

Call your Clipper Trained Factory Representative Collect and let us prove to you . . . on Free Trial . . . that we have the Best Head in the Business. Saws priced from $335. And . . . for outstanding economy, use the World's Finest Blades . . . Clipper Premium Quality.

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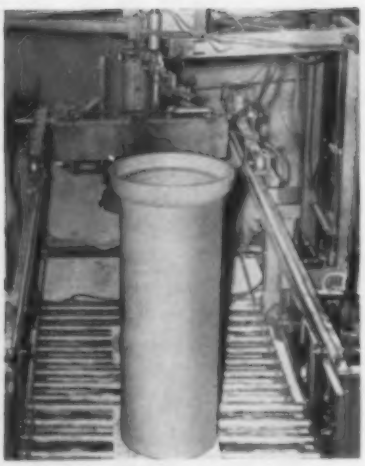
229X

NEW EQUIPMENT



Pipe-Handling, Finishing

Pearne & Lacy has designed an automatic pipe-handling and finishing machine that takes vertically extruded pipe directly from the press and requires only one-man attention, by the pressman. Called the Octopus, the off-bearer is completely automatic from the point where the operator lowers the former clear of the pipe. All controls, except grips, are hydraulically operated; grips are air-pressure controlled.

Pearne & Lacy Machine Co., Los Angeles 54, Calif.

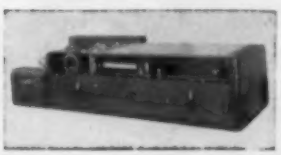
243/Circle on Reader's Service Coupon

Hot Material Conveyor

Cleveland Vibrator has announced a new vibrating conveyor designed for handling hot materials. The units are made of iron and steel completely, with the conveyor a spring mounted trough which is vibrated by an air powered mechanism under the trough. Unit uses no bearings, cams, couplings, shafts, pillow blocks, etc., maker says; only moving part is the air piston.

Cleveland Vibrator Co., Cleveland, Ohio.

244/Circle on Reader's Service Coupon

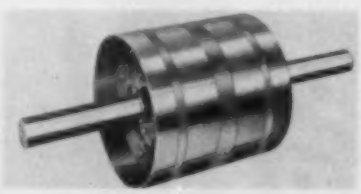


Belt (Stream) Weigher

A new belt (stream) weigher, known as the Pneu-Weigh, is being made by Omega. The unit meets the needs of continuous process industries for measurement and control of flow of dry materials at low to medium rates from 0 to 3000 lbs. per minute. The Pneu-Weigh operates over a 10:1 range, which can be converted to 50:1 by a variable speed belt drive.

Omega Machine Co., Providence 1, R. I.

245/Circle on Reader's Service Coupon



Ceramic Magnet Pulley

Stearns has developed a new Indox V ceramic permanent magnet that energizes the new pulleys, producing a magnetic field that effectively removes tramp iron from conveyor burdens. The new magnet is reported to equal the performance of electromagnetic types, and to be superior to conventional permanent magnet models. The units are available in standard widths from 12" up; diameters of 12" up.

Stearns Magnetic Products, Milwaukee 46, Wis.

246/Circle on Reader's Service Coupon

Tractor Shovel

Called the Y-18, Yale & Towne's new model tractor shovel reportedly has 25% greater work capacity than units presently available. This unit is Y&T's first entry into the field of bulk materials handling, with the units to be introduced during May at Yale branches. Capacity is 2500 lbs.; six foot high dumping clearance; 0 to 8 mph in 3½ seconds; top speed of 13 mph; 45 deg. bucket tip back at ground level. Bucket capacities will range from 10 to 27 cu. ft.

Yale & Towne Mfg. Co., Philadelphia, Pa.

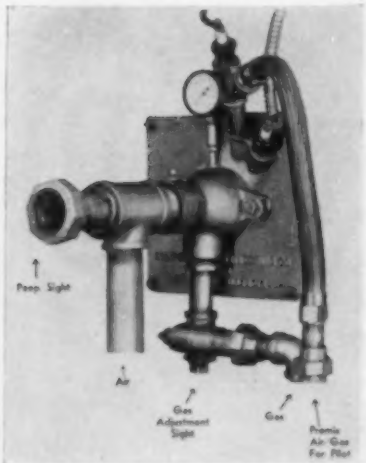
247/Circle on Reader's Service Coupon

Dump Trailer

A new frameless excavator dump trailer, introduced by Anthony, is the largest unit in their line. The design is reported to give 30% more stability than conventional dump trailers. Individual models range from 20 to 24' long. Body width is tapered, from 82" wide in front to 88" wide at the rear to provide easier unloading.

Anthony Co., Streator, Ill.

248/Circle on Reader's Service Coupon

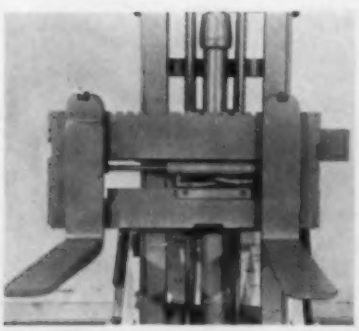


"Tempered-Air" Burners

Three sizes of "tempered-air" gas burners for optional use of excess air to provide wide range temperature and atmosphere control have been developed by Eclipse. Burner inputs range up to 1½ million BTU per hour. The manufacturer says the burners offer unlimited turndown range without flame failure; very wide air-to-gas mixture ratio; high safety.

Eclipse Fuel Engineering Co., Rockford, Ill.

249/Circle on Reader's Service Coupon



Side Shifter

A side shift attachment for the Clark-lift line of fork trucks has just been introduced. The attachment permits shifting of loads to right or left for more precise spotting. The attachment is available in two models, standard and heavy duty. The standard shifts three inches either way, for 2,000 lb. Clarks; heavy moves four inches, for the 3000 to 5000 lb. trucks.

Clark Equipment Co., Battle Creek, Mich.

250/Circle on Reader's Service Coupon

Fire-Chek Key Gauges

Bell Fire-Chek key gauges are used as a new way of measuring time and temperature of kiln firing by sewer pipe, fire brick, brick, tile and other ceramic product manufacturers. Although the basic idea of this method of measurement isn't new, successful use is reportedly based on the accuracy of the Bell Key with a new, improved precision engineered gauge to measure the key.

Bell Research Inc., East Liverpool, Ohio.

251/Circle on Reader's Service Coupon

NEMA Rerate Motors

Brook has introduced a new line of AC motors built to NEMA Rerate specifications. The line is reported to take advantage of technical improvements and new insulations to provide a lighter weight motor that's more compact. In one example, a motor that formerly weighed 74 pounds now weighs only 65 in the new line; output is the same.

Brook Motor Corp., Chicago 45, Ill.

252/Circle on Reader's Service Coupon

Plasti-King Gloves

Plasti-King gloves are made with the seamless wing thumb; made by an exclusive formula with infra-red curing that reportedly gives greater safety, greater resistance. Come in palm coated, fully coated, gauntlet and extra-heavy palm models.

Sarjanian Glove Co., Detroit, Mich.

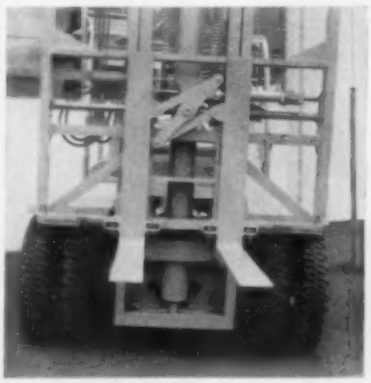
253/Circle on Reader's Service Coupon

Swiss-Lok Buildings

Buildings using the Swiss-Lok structural frames allow building widths to 100′ or more in width without center columns, allowing more unbroken work space; also have more overhead space. Swiss-Lok tubular building frames require no welding, cutting, riveting or bolting at the building site; reported to reduce erection time, crane service and labor costs; to give one third less weight with no sacrifice of strength.

Swiss Fabricating, Inc., Pittsburgh.

254/Circle on Reader's Service Coupon



Hydraulic Fork Spacer

A fork-spacer attachment enables the operator to adjust the spacing of forks hydraulically to accommodate loads of different widths, sizes and shapes. The unit is also equipped with a hydraulic side-shift accessory. Reported to provide greater versatility in handling jobs. Gerlinger Carrier Co., Dallas, Oregon.

255/Circle on Reader's Service Coupon

LP Gas Forks

Some advantages gained by use of LP gas for fork lift trucks are listed in a new information sheet that describes an LP gas installation for the new Space Saver trucks in 6,000-8,000 capacity. Hyster Co., Portland, Oreg.

256/Circle on Reader's Service Coupon

Crawler Tractor

Operating advantages and engineering features of the HD-6 diesel crawler tractor are reported in a 14-page catalog (MS-1251) from Allis-Chalmers Mfg. Co., Milwaukee, Wis.

257/Circle on Reader's Service Coupon

Pearne & Lacy

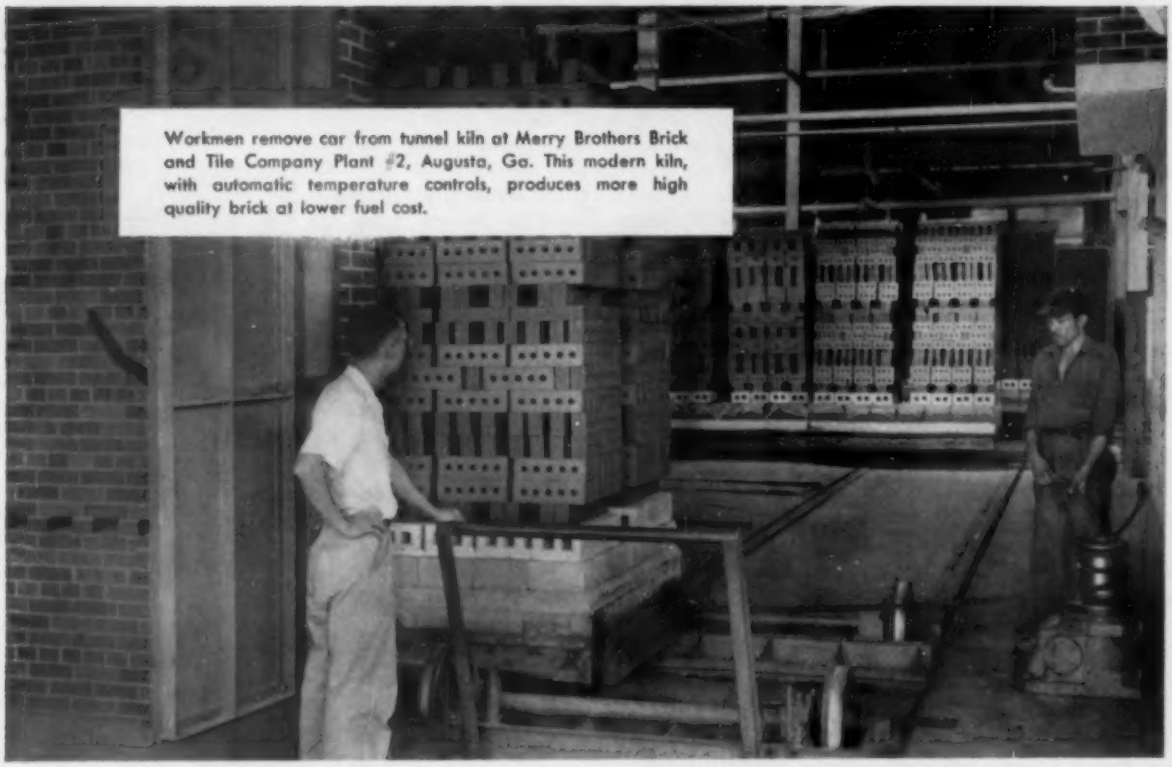
A new 20 page spiral bound illustrated catalog is now available, with complete details on the new Octopus pipe handling machinery and other equipment made by Pearne & Lacy Machine Co., Los Angeles, Calif.

258/Circle on Reader's Service Coupon

Vibratory Feeders

Syntron has announced publication of a new 32 page catalog which contains complete data and specs for the 13 vibratory feeders, and other feeders made by Syntron Co., Homer City, Pa.

259/Circle on Reader's Service Coupon



Workmen remove car from tunnel kiln at Merry Brothers Brick and Tile Company Plant #2, Augusta, Ga. This modern kiln, with automatic temperature controls, produces more high quality brick at lower fuel cost.

Honeywell controls save fuel . . .

Four circular chart ***ElectroniK*** recording controllers with ***Electr-O-Line*** control regulate main burners. Other burners are controlled by circular scale ***ElectroniK*** indicating controllers. Instrumentation also includes ***Protect-O-Vane*** excess temperature safety shutoff controllers, and Honeywell thermocouples and extension wire.

increase tunnel kiln production at Merry Brothers Brick and Tile Co.

Add sensitive, dependable temperature control to the inherent advantages of tunnel kiln operation, and you've got the right combination to increase production, improve quality and save fuel.

At Merry Brothers Brick and Tile Company, Augusta, Ga., a new tunnel kiln operates automatically with the help of Honeywell temperature controls. Here, as in other Honeywell installations throughout the country, customized instrumentation helps realize the full potential of the kiln . . . helps produce more and better products at less cost.

For a discussion of how Honeywell controls can improve the efficiency of your own kiln, call your nearby Honeywell sales engineer. He's as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, Wayne and Windrim Avenues, Philadelphia 44, Pa.—in Canada, Toronto 17, Ontario.

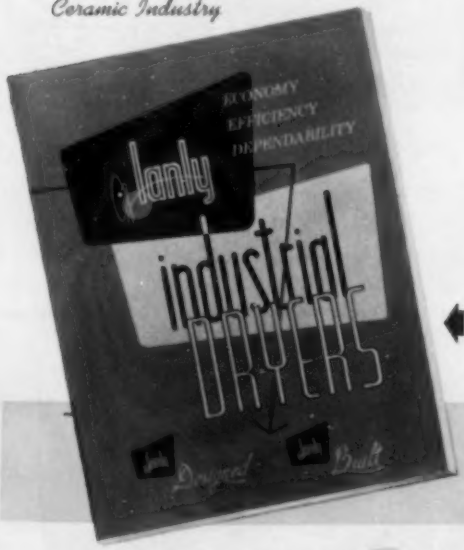
● **REFERENCE DATA: Write for Data Sheet 1.2-2, "Tunnel Kiln Instrumentation," and Catalog 1531—"*ElectroniK* Controllers."**

MINNEAPOLIS
Honeywell
BROWN INSTRUMENTS
First in Controls

This 2 Pass LANLY Conveyorized Oven Cures Plastisol Joints on

VITRIFIED PIPE

Heat Processing Engineers for the Ceramic Industry



The plastic material is applied to the preheated pipe after it leaves the first pass of the oven and is cured in the second pass.

The rapidly expanding production of vitrified pipe with plastisol joints is being greatly expedited by the installation of LANLY ovens in various plants throughout the country manufacturing this product.

NEW BULLETIN 572
Covering Refractory, Sanitary Ware and Vari-Purpose Dryers is yours for the asking.

Manufacturers Using LANLY Equipment for Preheating Clay Pipe and Curing Plastisol Pipe Joint Compound.

American Vitrified Products Co. • Clay City Pipe Co. • W. S. Dickey Clay Co. • Gladding, McBean & Co.
Evans Pipe Co. • Graff-Kittanning Clay Products Co. • Larson Clay Pipe Co. • Logan Clay Products Co.
Monroe Clay Products Co. • Pomona Terra-Cotta Co. • Robinson Clay Products Co. • Stillwater Clay Products Co.
Streator Drain Tile Co. • Superior Clay Corp. • Tillotson Refractories Co. • Utah Fire Clay Co.

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STEP BEARING TROUBLE?

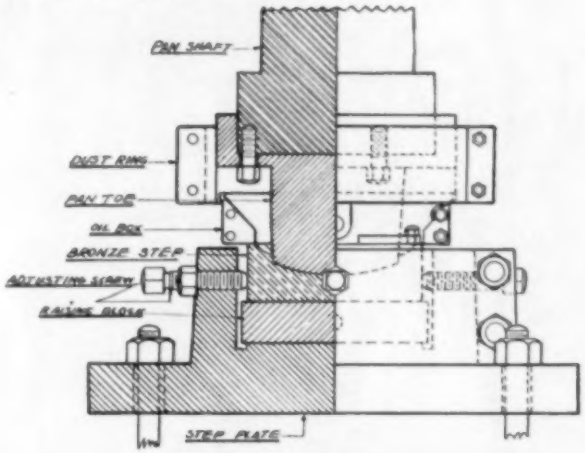
ANY ONE OF THESE DEPENDABLE

TORONTO

THRUST BEARINGS WILL CURE THIS TROUBLE AND WILL FIT ANY PAN OR GRINDER

STANDARD STEP BEARING

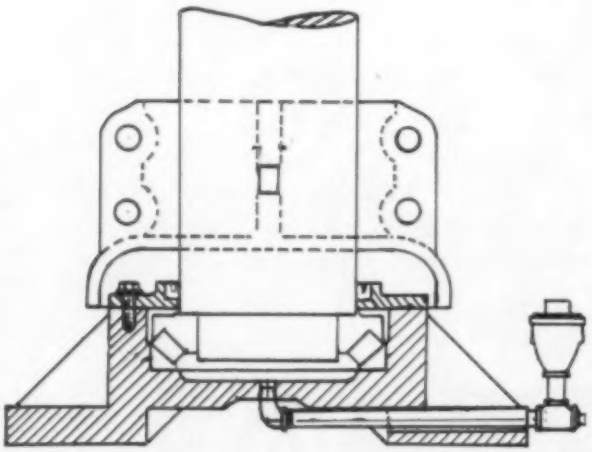
With Bronze Step and Chilled Alloy Toe. Wearing Parts Run in Oil and Are Protected from Dust by a Dust Ring. Step Bearing Easily Serviced and Oiled.



STEP BEARING ARRANGEMENT

SELF-ALIGNING ROLLER

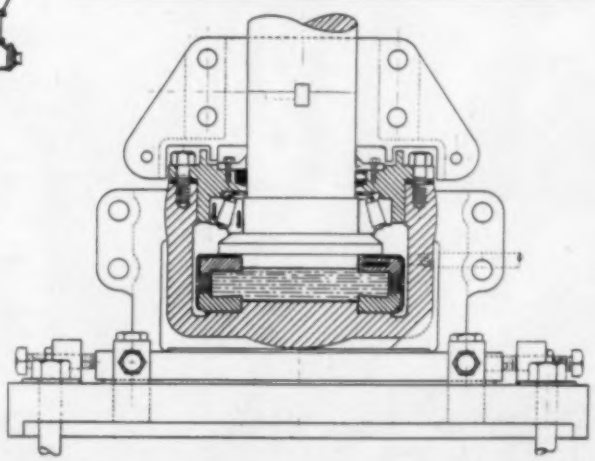
Thrust Bearing Toe Assembly. Bearing Runs in Oil Bath and Is Protected from Dust by Spring-Loaded Seal and Casting Cover.



DOUBLE BEARING TOE

With Self-Aligning Housing. Runs in Oil Bath and Is Protected from Dust by Seal and Grease Packed Cover Assembly.

All Bearing Assemblies Easily Removed Without Raising Pan



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TORONTO, OHIO

ACTUAL TEST RECORDS *

IN THE REFRACTORY INDUSTRY PROVE

400% FASTER performance

with

A research engineer for a large midwest manufacturer of refractories recently tested the phenomenal Smith Turbine-Type Mixer on six different mixes. Here is a summary of the engineer's unbiased evaluation:

MIXING TIME
averaged out *four times faster* than the conventional type mixer previously used on the same six mixes.

BLENDING
of the materials was considerably more uniform.

A FASTER MEANS OF COATING
— and a thicker, denser coat —resulted from the new mixer in cases where the coating of one material by another was desirable.

NO EXCESSIVE BREAKDOWN OF PARTICLE SIZE
occurred in the mixing of lightweight friable material.

CLAY "BALLING" TENDENCIES
were materially reduced, and a good clay coating was obtained on such materials as calcine and quartz.

* So convincing were the test results that the manufacturer purchased and is now using the new Smith Turbine-Type Mixer. Name of manufacturer and type of mixes tested will be furnished on request.

"LIVE MIX" IS THE ANSWER!

Mixing is done in a doughnut-shaped drum. There is no "dead center" area. Blades set up a braiding action which breaks down centrifugal forces. As a result the Smith Turbine-Type Mixer mixes at a peripheral rate of *six hundred feet per minute!*

WRITE FOR DETAILS TODAY!

SMITH

Since 1900, the pioneer designer and foremost manufacturer of the world's finest mixers.

THE T. L. SMITH COMPANY • Milwaukee, Wisconsin • Lufkin, Texas

Affiliated with Essick Manufacturing Company • Los Angeles, Calif.

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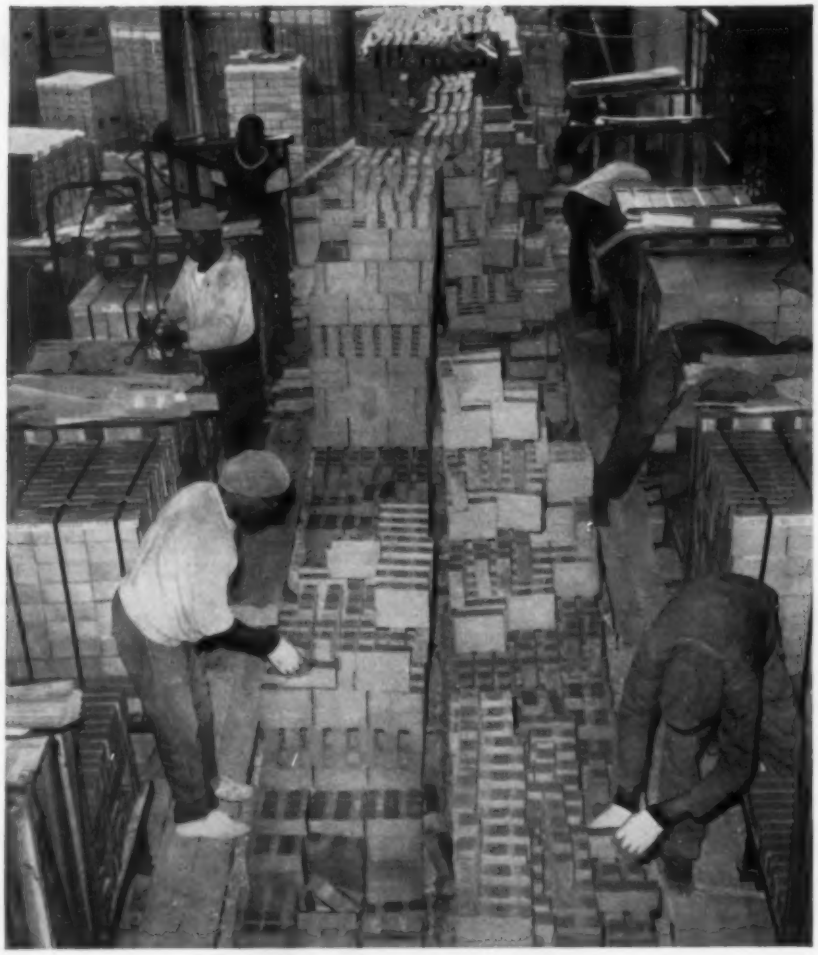


Brick are stacked from kiln car to six strapping stations. No rehandling. Each cube samples contents of several kiln cars for better brick blend. Stacking jigs have side and back walls for smooth-sided cubes. Each operator works two stacking jigs . . . lift truck removes one cube while operator stacks and straps the next cube. Fork lift trucks approach from outside, left and right . . . move cubes directly to yard or truck.

Signode Helps Kelsey-Ferguson Save $100,000 a Year with New Packaging System

Kelsey-Ferguson is one of the pioneers in the large-scale packaging of brick. All of their 100,000 daily output of brick has been packaged for some time. But an all-new packaging system is saving over $100,000 per year, and producing better brick packs!

The new system, worked out by a Signode field engineer and Kelsey-Ferguson personnel, incorporates the latest improvements in Signode tools and methods. Noteworthy is the fact that $26,000 of the yearly savings come from reductions in the cost of strapping and associated unitizing materials alone. The balance of the savings is in cost of labor.

Heart of the new system is direct stacking from tunnel kiln to the strapping stations, eliminating all rehandling and restacking. This is described in the picture caption.

Use of Signode's fast air-powered strapping tools makes strapping much faster, much easier, and produces correct strap tension every time.

Isn't it time to take a new look at your methods of packaging? A Signode sales representative will be glad to help you do so, and to show you what's new from Signode.

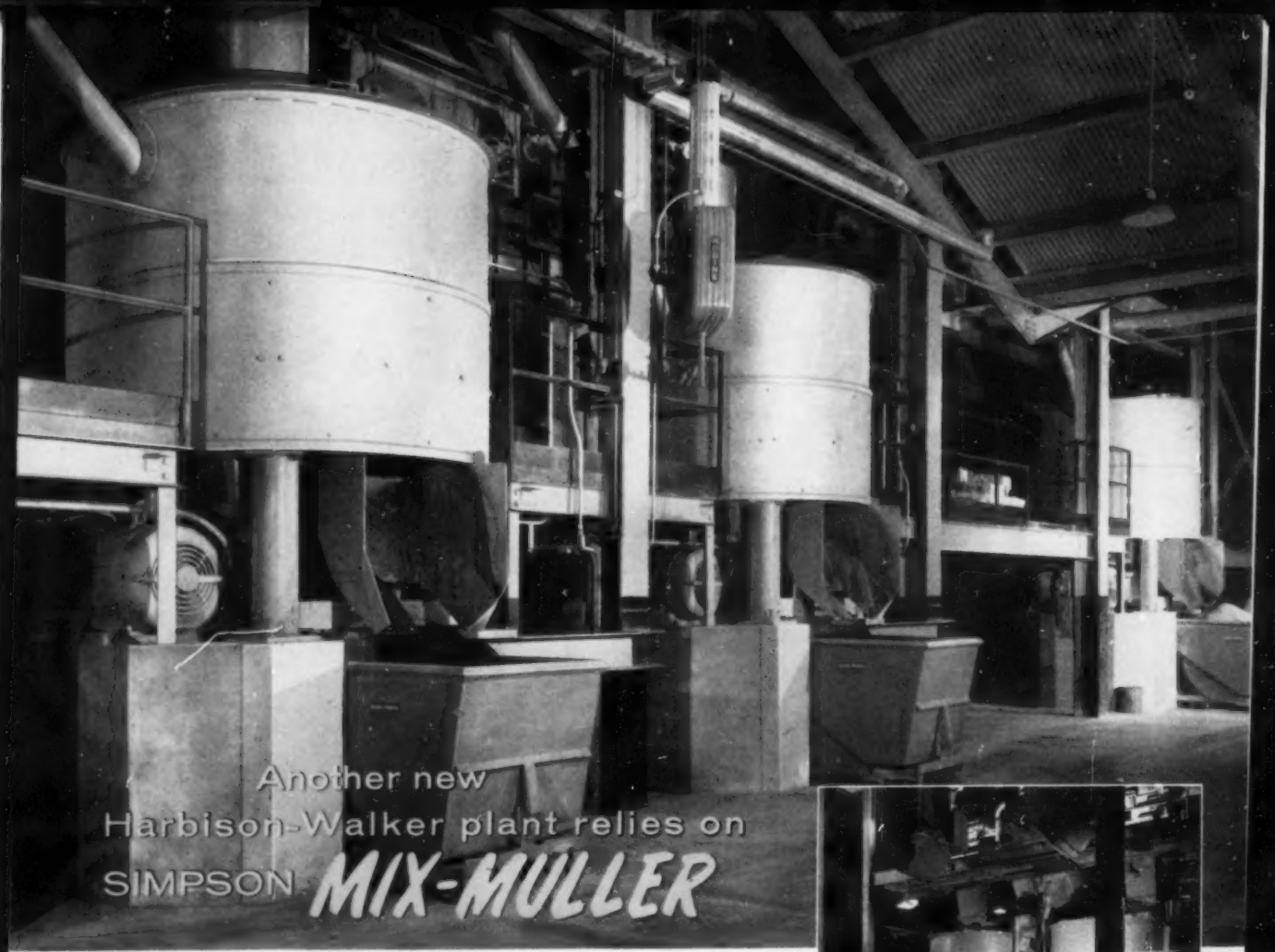
Call him today, or write:

SIGNODE

SIGNODE STEEL STRAPPING CO.

2629 Western Avenue, Chicago 47, Illinois

Offices Coast to Coast. Foreign Subsidiaries and Distributors World-Wide.
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto



Another new
Harbison-Walker plant relies on
SIMPSON MIX-MULLER

Accurate batch control and positive moisture dispersion vital at new Hammond "basic" plant

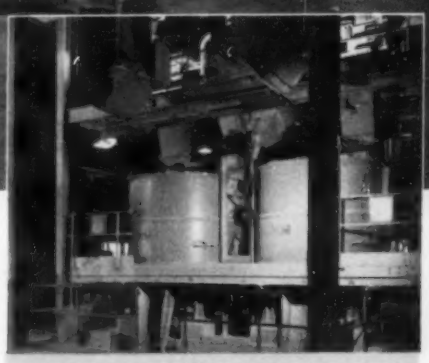
Control is the keynote at Harbison-Walker's new basic refractories plant recently completed at Hammond, Indiana. *Seven stories* of the most up-to-date screening, batching and proportioning equipment help deliver precisely controlled, accurately proportioned materials to the mixing floor. Here, three 2½F Simpson Mix-Mullers provide intensive *controlled dispersion* of moisture, binders and basic materials, to predetermined properties—for delivery to a battery of power presses.

At Hammond, as at many modern Harbison-Walker plants—and in the refractory operations of leading producers *all over* the country, Mix-Mullers are relied upon for the positive moisture control, intensive blending and controlled dispersion that is so necessary to the scientific production of dense, precision sized, precision *performing* refractory products.

Yes, wherever quality and control really count—in the preparation of refractories or *any* clay or ceramic product . . . you'll find Simpson Mix-Muller in the key slot.

WRITE FOR BULLETIN showing how Mix-Muller is used throughout the refractory, brick, ceramic and heavy clay products industry.

SIMPSON MIX-MULLER DIVISION
National Engineering Company
654 Machinery Hall • Chicago 6, Illinois



Above: Two of six No. 3 Mix-Mullers used to prepare all silica refractory material at Harbison-Walker's *Windham, Ohio* plant. In all, Harbison-Walker uses more than twenty Simpson Mix-Mullers.

Below: View from mixer platform showing 2½F Mix-Mullers at Harbison-Walker's Hammond, Indiana plant. Weigh larry in background is charged from overhead bins. Is used to receive components for precisely proportioned 4000-lb. batch

C-158

TECHNICAL BULLETIN

BEL-RAY COMPANY, INC.
Madison, New Jersey

BELCO #5016 GREASE

LUBRICATES KILN-CAR BEARINGS AT TEMPERATURES UP TO 1200F

- guaranteed not to carbonize
- does not harden
- forms no decomposition products
- eliminates dripping on tracks
- cuts down pusher ram pressures
- prevents bumper damage
- keeps bearings clean and free
- lasts 3 months between regreasings
- reduces annual lubricant costs

THE WHEEL ABOVE AT LEFT with its clean, free-running bearing was photographed exactly as it came off the jacked-up kiln car. When the picture was taken, this car had been in service 4½ months since other grease residues were cleaned out and bearings lubricated with Belco #5016 Grease. Bearings had received no other care except routine regreasing 3 months after that. The bearing below, by contrast, shows caked solids from a synthetic oil formerly used at the same kiln. This particular bearing had actually been soaked in solvent and partially cleaned off. It had made only a few passes through the kiln before it became clogged with abrasive residue.

BEL-RAY CO., INC. MADISON, NEW JERSEY

WRITE FOR FREE SAMPLE AND LITERATURE

Ceramic Glazing

...the answer to longer kiln life and lower fuel costs!

Both these dollars and cents benefits are made possible because ceramic glazing permits lower burner settings. Reduction of flame temperature naturally reduces tunnel kiln temperature—the life of your refractories is lengthened—you save fuel—while you increase the capacity of your kiln and turn out a better-performing, more saleable pipe.

Aren't these definite savings possibilities worth investigating? Write for Bulletin #5008. This bulletin, by Pemco's Technical Supervisor, outlines the known advantages of ceramic glazing . . . explains why glazes must be "tailor-made" for specific clays . . . tells you how to take advantage of the technical services and assistance available to you from Pemco's Research Laboratory.

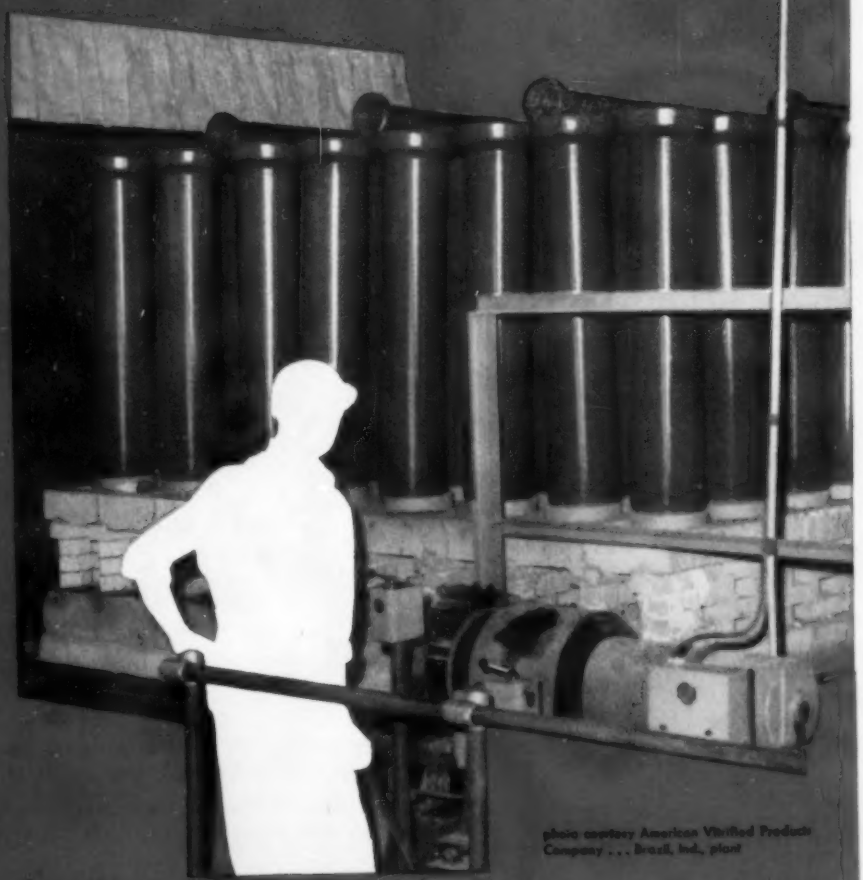
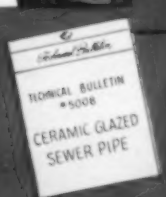


photo courtesy American Vitrified Products Company . . . Brazil, Ind., plant

PEMCO corporation

BALTIMORE 24, MARYLAND

World's Largest Supplier of Glazes to the Ceramic Industry



STRUCTURAL TILE PRODUCERS — PEMCOLORS give you perfect uniformity with zinc or zincless glazes, matt or glossy finishes . . . in the Institute's Standard Colors or in special colors to match your specifications.

• Bituminous coal contributes to plant operating profits by its *productivity* and *stability*. Virtually limitless supply, plus most modern mining methods, gears production to *any volume demand*.

Accessibility and increasingly efficient burning equipment mean economical, constant-cost for today and tomorrow.

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Ask our man! BALTIMORE & OHIO RAILROAD, BALTIMORE 1, MD., Phone: LExington 9-0400

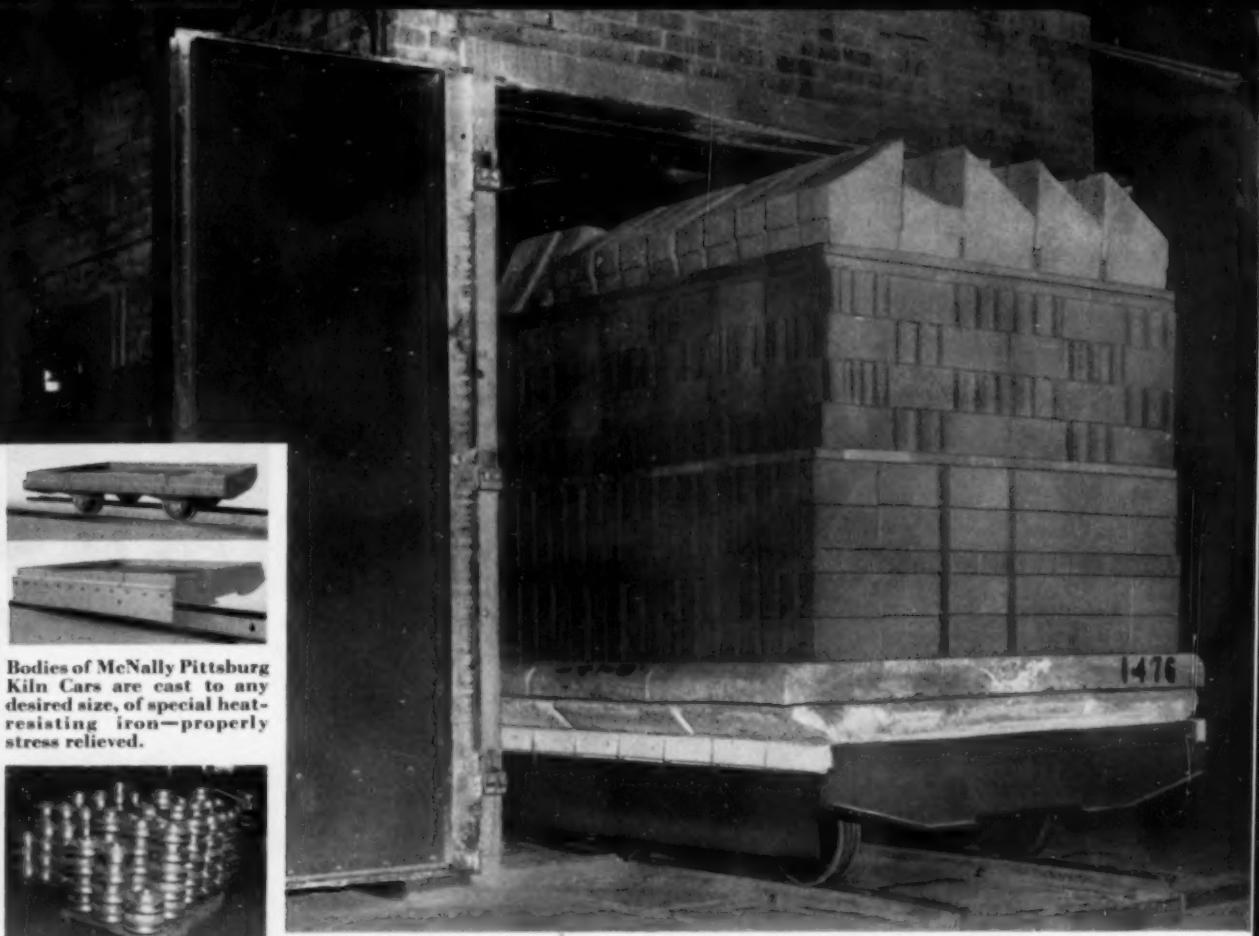
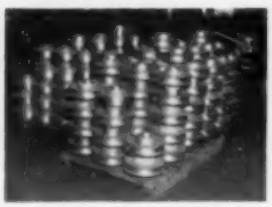


Photo Courtesy A. P. Green Fire Brick Co.

Bodies of McNally Pittsburg Kiln Cars are cast to any desired size, of special heat-resisting iron—properly stress relieved.



MacAlloy wheels, double-flanged one side, straight-faced other side—keep cars on track.

No lubricant needed on these cold-rolled steel axles —easily cleaned by compressed air.

What makes these Kiln Cars Stay in Service So Much Longer?

Here's where years of experience in designing and building equipment for the basic industries can HELP YOU CUT COSTS. Here are kiln cars engineered of special heat-resistant iron normalized by proper stress relieving—for longer life —fewer costly work stoppages.

Built to your specifications, McNally Pittsburg Kiln Cars feature exclusive MacAlloy iron—stress relieved—special bearings protected for long service. Investigate these engineered kiln cars. Mail coupon.

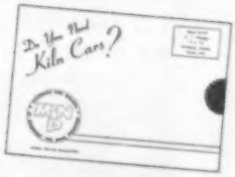
"Ask the men who know"—McNally Pittsburg Manufacturing Corp.

Other McNally Equipment

- Bevel crown gears
- Bevel crown gear pinions
- Muller wheels
- Muller tires
- Muller track plates
- Muller shafts
- Manual clutches
- Plow holders
- Swivel plates for plows
- Screen arms
- Screen plates (round and slotted holes)
- Screen plows
- All types of sleeves and bushings for dry pans
- Kilns
- Damper rings
- Damper ring covers
- Pug Mills
- Pug Mill shells
- Pug Mill shafts
- Pug Mill knives
- Pug Mill dies
- Drain tile dies
- Bushings for tile presses
- Brick machine dies
- Feeders
- Brick transfer car wheels and axles
- Conveyors, belt, scraper, apron
- Pinions, gears, sprockets, shafts, axles, and other parts to your specifications

GET THIS FREE BROCHURE AND SPECIAL INFORMATION

McNally Pittsburg Mfg. Corp., Dept. B
Pittsburg, Kansas



Please send information and illustrated folder on McNally Pittsburg Kiln Cars.

☐ Information on other listed items:_____

Name_____ Title_____

Company_____

City and State_____

Name your bearing needs...we'll meet 'em pronto from 30 types, 10,247 sizes

TIME and time again, machinery makers come to the Timken Company for help with some special bearing application problem. One they think hasn't been solved before. And time after time, from our 30 types and 10,247 sizes of Timken® tapered roller bearings, we've come up with the bearing design to do the job and at minimum cost.

It's no accident that we can help out so often. In over 50 years of helping machinery builders with bearing problems, we've engineered and produced the world's largest selection of tapered roller bearings. And we've constantly improved our designs. The answers to thousands of bearing application problems are already in our files. Ready and available to help you.

And machine users get the same swift service if they ever need a replacement Timken bearing. Even for old machines, they can almost always count on immediate delivery of Timken bearings for replacement.

Why not call on our engineers for help whenever you have a bearing application problem or requirement? Timken is your No. 1 bearing value. Wherever wheels and shafts turn, Timken bearings eliminate friction, cutting wear and maintenance to a minimum. Specify bearings trade-marked "Timken" for the machines you buy or build. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ont. Cable: "TIMROSCO".

This symbol on a product means its bearings are the best.

TIMKEN *TAPERED ROLLER BEARINGS ROLL THE LOAD*

TRADE-MARK REG. U. S. PAT. OFF.

MILLER KILN CARS ARE

built to stack up!

No doubt about it. Miller Kiln Cars are built to last. Ruggedly designed and constructed according to *your* specifications. You get years of bonus performance.

Equipped with Timken Tapered Roller Bearings, Miller Cars are easily maneuvered by one man. Two of these Timken Bearings per wheel insure smoother, anti-friction operation.

Maintenance costs are less, too. Tapered bearings mean *permanent* wheel adjustment and less frequent lubrication. One manufacturer reports continuous operation for 17 months without lubrication.

Call, write or wire Miller today. Miller can build Kiln Cars for any type installation, regardless of who made the tunnel kiln.

Miller Equipment Company

P. O. Box 1566 • Telephone 6300 • Salisbury, N. C.

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WALTER C. STOLL & SONS
5028 Alhambra Avenue
Los Angeles 32, California

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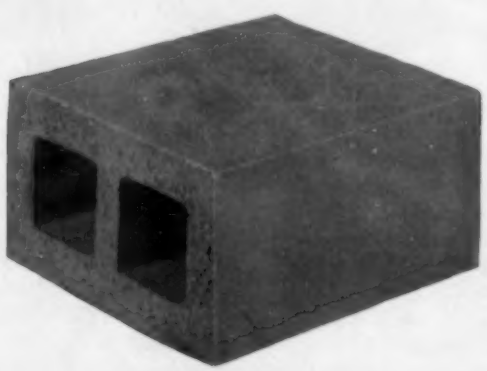
A. K. MOULTON ASSOCIATES
138 Harriet Drive
San Antonio 12, Texas

Photo shows PACO 4½" x 8" x 9" car tops set on end and used as perimeter block. Top deck is constructed with 4½" x 8½" x 18" PACO car tops. Each corner has a 7" x 8½" x 9" cored corner block. Perimeter and corner blocks are filled with lightweight insulation.

PACO CAR TOPS can cut your replacement costs as much as 50% — and increase your profits! The reason is simple. Paco Car Tops are made from the mineral pyrophyllite. This unusual, superior raw material permits the manufacture of thinner wall, larger core car top that is lightweight, stronger and highly resistant to extreme thermal shock.

PACO CAR TOPS do not have a softening point below actual fusing point, providing greater resistance to hot load deformation. The result is better, more efficient production. Paco Car Tops are easy to handle and install, and simple to replace individually as needed.
There is a PACO engineer as close as your telephone—or write for complete information!



NORTH STATE PYROPHYLLITE COMPANY, INC.

Telephone BRoadway 4-7055 Greensboro, North Carolina

OTHER PACO PRODUCTS INCLUDE: • Paco Plastic • Pacocast • Paco H.T. Cements • Paco Fire Brick Mortar • Paco Side Car Brick • Paco Fire Brick • Paco Ladle Lining • Paco Heatzone Compound

FIVE days' time completed the SWISS-LOK structural frame for this 54,300 sq. ft. building for Logan Clay Products Co. at Logan, Ohio.

ONE crane was the sole erection equipment required for this building structure for Davis Firebrick Company at Jackson, Ohio. Crane service was required but one-third the time of conventional erection because of fast SWISS-LOK connections.

Corrugated aluminized steel sheeting was selected by Davis Firebrick Company for this building at Oak Hill, Ohio. Any type of sheeting desired is applicable to SWISS-LOK structures.

Brick and Clay Products Companies get lower cost, faster building construction with SWISS-LOK Tubular Building Frames

LOWER COST BECAUSE:

Tubular members save ⅓ steel weight without loss of structural strength
⅓ less shipping weight
Greatly reduced crane service (no other equipment needed)
Greatly reduced erection labor hours

FASTER BECAUSE:

No welding, cutting, bolting or riveting at the site
All parts pre-fitted for quick assembly and locking
All frame members can be shipped by fast motor freight

BETTER BECAUSE:

Swiss-Lok building frames do not depend on roofing and siding construction for support, alignment or rigidity
Truss chords are parallel to roof pitch, allowing more overhead space for movement or storage of materials
All new, tested pipe is used exclusively

All stress calculations for SWISS-LOK building structures conform with A.I.S.C. standards. Any type of roofing and siding may be used, and standard wall tying and sheet metal fastening are applicable. For descriptive, illustrated literature, write:

SWISS FABRICATING, INC.

Camp Horne Road, Pittsburgh 2, Pa. • Phone WEllington 1-2646

International
SPECIAL HEAVY DUTY

with PUSH BUTTON OPERATION

- Welded Steel Frame
- Steel operating mechanism can be arranged with—
- Push Button operation and control
- Air Clutch with electric pneumatic control
- Stroke Counter and visual time recorder
- Safety Devices operating from control panel
- Electric Eyes — operating from control panel
- Centralized Lubricating System Strain Gauges connected to both bars — not one
- Dust tight gear guards, if desired
- Control Cabinet electrically wired with solenoid valves operating electric eyes — GATES side bar pressure regulator — stroke counter and time recorder
- Single Stroke or automatic operation
- Pause De-Airing if desired
- NOTE: This press can be adapted to making cored brick

We have Always —

Line-bored the one-piece Welded Steel Frame at one setting, to insure perfect shaft alignment with close tolerances and precision to all bearings and shafts.

Sooner or later the man looking for a better Press that will give higher pressures buys an INTERNATIONAL — then he wonders why he didn't do it sooner. He gets better service, he cuts costs, and he makes more money. So, if that's what you want, the only question is "WHEN"? — When are you going to call us about the new INTERNATIONAL Press that's engineered to do your job better, at lower cost?

We can't think of a better time than right now to get all the facts. All it takes is to let us know you're interested. Of course there's no obligation and you may be surprised! Ask for Bulletin —

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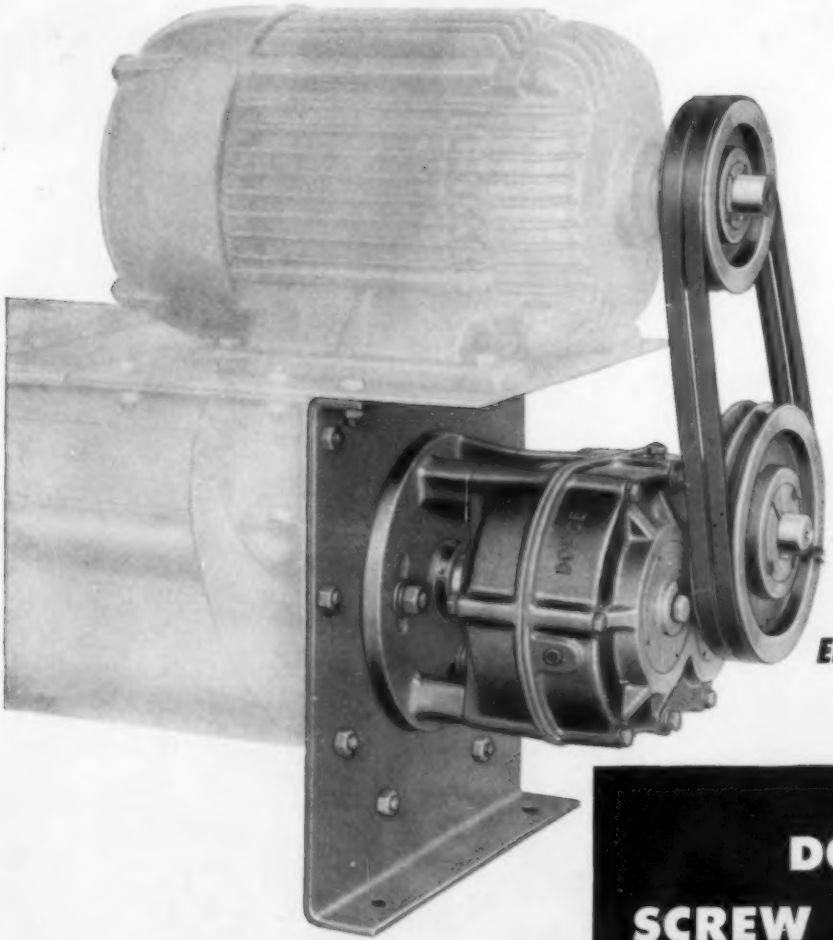
BRICK, TILE, POTTERY AND CERAMIC MACHINERY AND EQUIPMENT



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DODGE SCREW CONVEYOR DRIVE

A complete package drive, including

- **Rugged, high-efficiency Reducer.**
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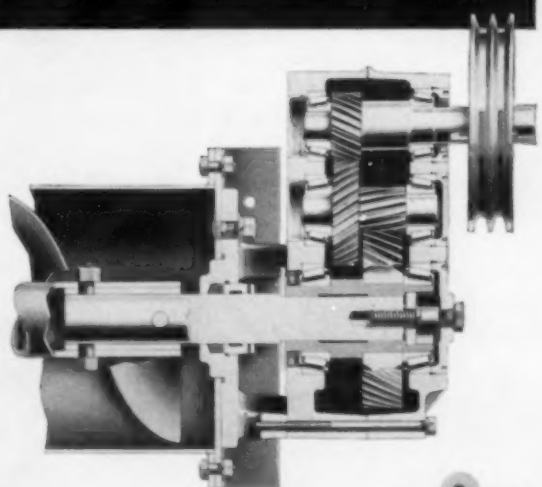
DODGE MANUFACTURING CORPORATION, 4900 Union, Mishawaka, Ind.



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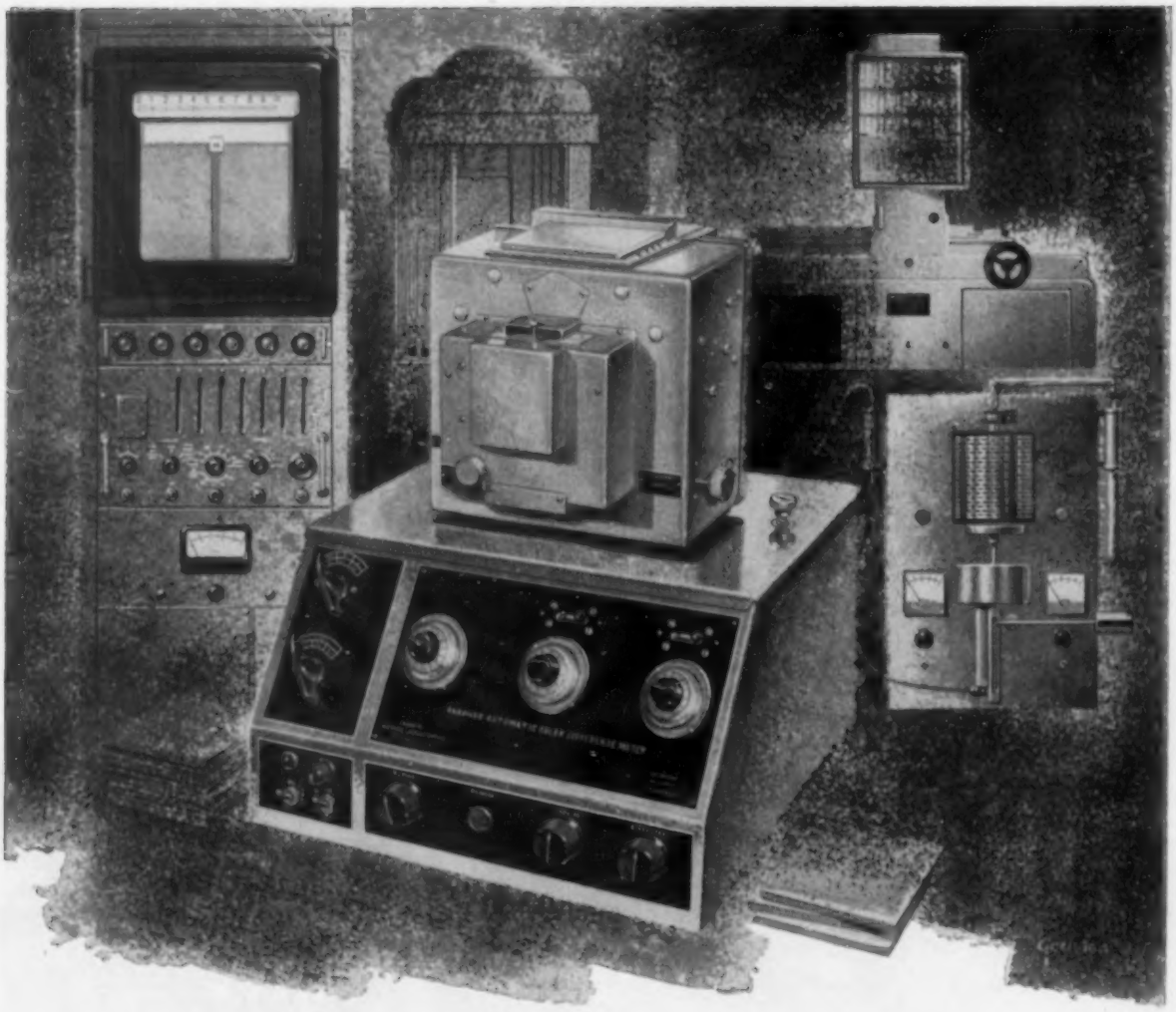
of Mishawaka, Ind.

CALL THE TRANSMISSIONEER, your local Dodge Distributor. Factory trained by Dodge, he can give you valuable help on new, cost-saving methods. Look in the *white* pages of your telephone directory for "Dodge Transmissioneer."



nothing but the best for TAM customers

Well aware of the importance of delivering consistent high quality in quantity, TAM sets the highest standards and . . . equips trained personnel with the latest means to assure only the best for our customers. For instance, before being released for shipment, representative samples from each lot of TAM opacifiers are thoroughly evaluated in commercial glazes. Further assurance of the best when you specify and buy from TAM.

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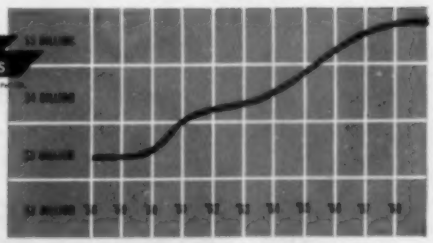
TAM PRODUCTS

TAM PRODUCTS *Superpax A • Superpax • Opax Opax S • Treopax • Zircopax • Double Silicates*



With an excellent growth potential projected for the Ceramic Industry, TAM is prepared to deliver quality materials in quantity.

Harbison-Walker Refractories withstand Explorer's terrific blast-off heat!

The pad from which earth satellite Explorer was launched by the Army is paved with Harbison-Walker Extra Strength Castable Refractory.

HARBISON-WALKER REFRACTORIES COMPANY
AND SUBSIDIARIES
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The high refractoriness and great strength of Harbison-Walker Extra Strength Castable, which enable it to withstand blast-off temperatures and shock, make it particularly adapted for its wide industrial use.

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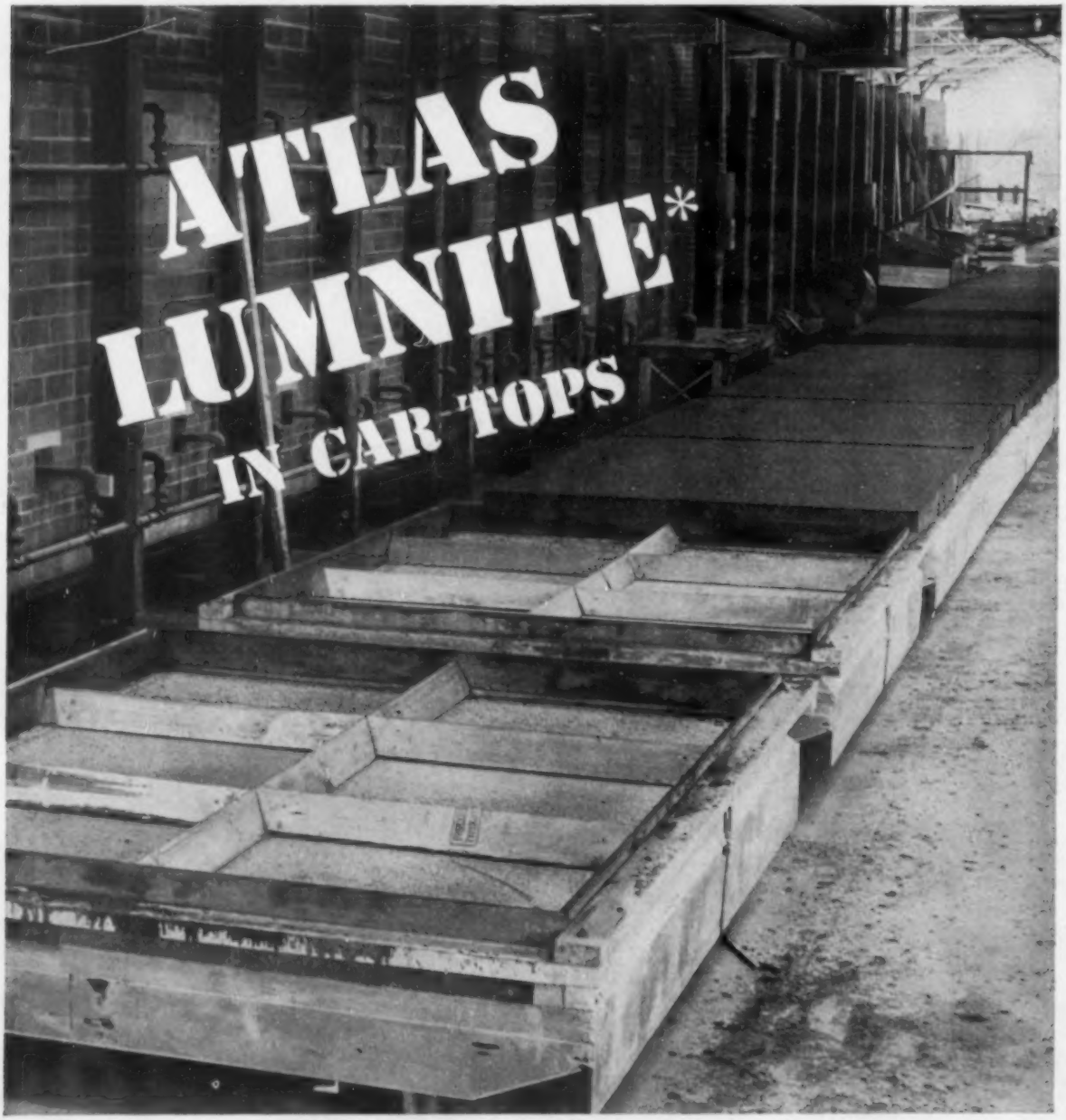
Launching Pad paved with Harbison-Walker Castable Refractory



Constructing car tops of refractory concrete, made with LUMNITE cement, in new tunnel kiln. Front cars show forms in place, ready for concrete to be placed. Bowerston Shale Co., Hanover, Ohio.

- Refractory concrete tops add to car stability, remain level, help reduce wrecks, require minimum maintenance.
- Refractory concrete, made with LUMNITE calcium-aluminate cement, offers greater resistance to high temperatures and thermal shock.
- Placement is fast, easy, and can be done with plant labor – service strength is reached within 24 hours.

For maximum convenience, use castables made with LUMNITE cement. These are packaged mixtures, ready for use. Just add water, mix and place. Made and distributed by leading manufacturers of refractories.

Write for a copy of "Lumnite Refractory Concrete Manual," Universal Atlas, 100 Park Avenue, New York 17, N. Y.

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* "LUMNITE" is the registered trade-mark of the calcium-aluminate cement manufactured by Universal Atlas Cement Company. L-183

UNIVERSAL ATLAS CEMENT COMPANY—member of the industrial family that serves the nation—**UNITED STATES STEEL**

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A. P. GREEN
INSULATING FIREBRICK

CUT FUEL COSTS . . . INCREASE PRODUCTION IN PERIODIC KILNS

There has been a tremendous increase in the use of lightweight Insulating Firebrick for lining both round and rectangular down-draft kilns.

An average saving of 20% in fuel has resulted in kilns using Insulating Firebrick in only the kiln crowns. A 35% reduction in fuel costs was accomplished in a recent installation of A. P. Green G-26 Insulating Firebrick in the side walls and crown of a 28-foot diameter, coal-fired kiln.

Other advantages of A. P. Green Insulating Firebrick in periodic kilns are—reduction in time of firing cycle because of the faster heating and cooling of the lightweight lining; more uniform heat distribution throughout the kiln and easier temperature control—resulting in fewer rejects and less breakage of the ware; more comfortable working conditions because of the faster cooling of the kiln; and ease of weatherproofing the much cooler crown with low melting asphalt base compounds.

Let your A. P. Green Representative assist you in selecting the proper quality of Insulating Firebrick for your kilns from A. P. Green's complete line—six different brick for temperatures from 2000° F. to 3200° F. He's listed in the classified section of your telephone directory . . . or write direct.

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A. P. GREEN FIRE BRICK COMPANY

Mexico, Missouri, U. S. A.

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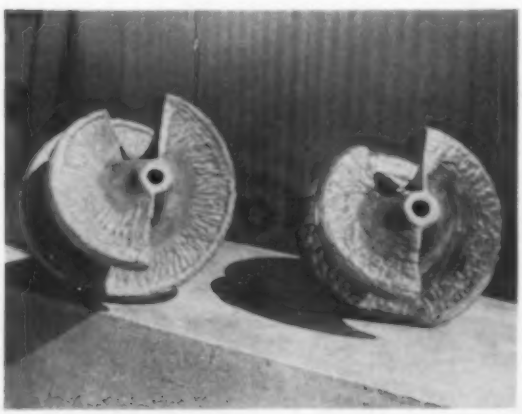
IN CANADA: A. P. Green Fire Brick Co., Ltd., Toronto 15, Ontario

4 ways to cut operating costs and avoid downtime... with STOODY HARD-FACING

Abrasive wear knows no recession and is no respecter of equipment. Yet it can be reduced with proper treatment. A few beads of Stoody hard-facing alloy, applied manually, semi-automatically or automatically to wearing surfaces, usually *doubles* part life! In many cases life increases from 400% to 500% are not uncommon. Maximum life, however, depends upon proper choice of alloy for each wear problem.

With its complete line of alloy materials for all methods of application... manual gas, manual arc, semi-automatic or fully automatic, you're assured of greatest economy and long, productive service. Full data on ways to make all parts last longer is given in the Stoody Hard-Facing Guidebook. Ask your Stoody Dealer for a copy (check the Yellow Pages of your Phone Book) or write direct.

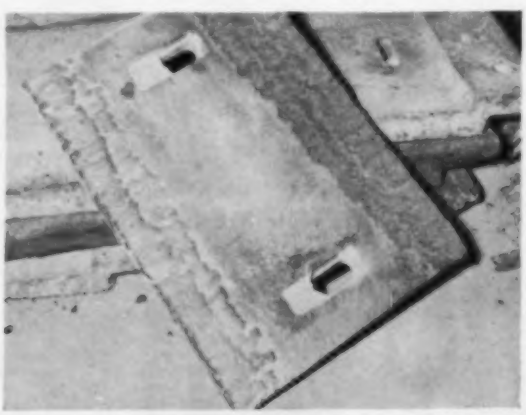
STOODY COMPANY
11950 East Slauson Avenue
Whittier, California



PUG MILL POINT AUGERS *were lasting less than 1 week. Hard-faced with Stoody 21, service life has jumped to 3 full weeks. These augers can usually be rebuilt at least 5 times. At left as hard-faced; at right as worn.*

BARREL LINERS *normally wear out in three months. Stringer beads of bare Stoody 21 were applied in checkerboard fashion to catch and pack surface with mix. Liners now last over a year.*

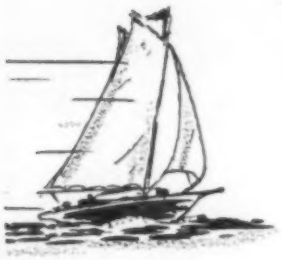
EAGLE CRUSHER SEGMENTS—*These and other types of crushing equipment all benefit by covering wearing areas with Stoody alloys. Part life is economically extended and full crushing efficiency retained.*



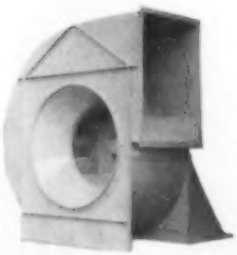
MULLER PLOWS—*Subject to severe abrasion in grinding operations, two or three passes of Stoody 21, applied to edges retard wear, hold corners to size and maintain overall operating efficiency.*

Smooth Air Handling

for Tunnel Kiln-Dryers, Rotary Kilns and Sintering Belts . . .

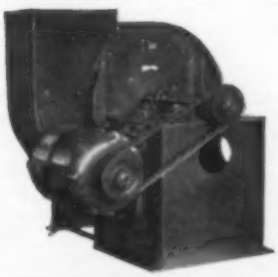


by ROBINSON



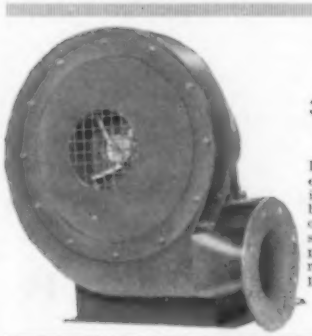
1. Type "J" Fan

Robinson type "J" Backward Curve fan (Bulletin #2500), built in a complete range of sizes and types of construction to meet exacting demands for air supply to Waste Heat or Direct Heat Dryer Systems, Dryer Recirculation, Dryer Exhaust, Tunnel Kiln and Dryer Cooling Zones, also Forced Draft Fans for Boilers.



2. Type AE-6-BB Exhauster

Robinson type AE-6-BB Exhauster (Bulletin #5100) is serving every type of exhaust system in ceramic plants such as Tunnel Kilns and Rotary Kiln Exhaust, Dust Exhaust and Collecting Systems, etc. The AE Exhauster is also built from heat resistant alloys for recirculating gases in tunnel kilns at temperatures up to 1500° F.



3. Type CS Pressure Blower

Robinson type CS Pressure Blowers (Bulletin #1100) for supplying combustion air to oil or gas burners are built in a wide range of sizes as to volume and pressure. Each size is designed to perform efficiently over a wide range with small variation in pressure.

4. Sulkey Type Fan

Robinson Sulkey type Cooling Fans (Bulletin #8001) has countless uses in the ceramic industry for rapid cooling of kilns or ware, and improvement of working conditions. They are ruggedly constructed yet readily moved about and adjusted for air flow. There is a fan of correct size and capacity for every requirement.

5. Tubeaxial Hi-Draft Fans

Robinson Tubeaxial Hi-Draft Fans Induced Draft) for periodic kilns have "proven their use" through their ability to shorten burning time and improve the product through uniform firing on several hundred kilns. The Tubeaxial Fans in standard construction (Bulletin #6001) are extensively used for the recirculation and exhaust on batch and waste heat dryers and also for general ventilation.

Our representatives to the ACS Convention in Pittsburgh

Mr. James L. Henderson, Jr.

Mr. William W. Henderson

Mr. Neal Robinson

will welcome an opportunity to review your fan applications with you. See the Directory Board for our room number.

ROBINSON VENTILATING COMPANY BCR-4
Zelienople, Pennsylvania

Please send further information on the following:

1. Robinson type "J" Fans.
2. Type AE-6-BB Exhaust Fans.
3. Type CS Pressure Blowers.
4. Sulkey Type Cooling Fans.
5. Tubeaxial Hi-Draft Fans.

Name_____

Company_____

Address_____

City_____ State_____

STRENGTH AND QUALITY

ROBINSON VENTILATING CO.

ZELIENOPLE, PA.

SEE OUR CATALOG IN Ceramic data book Page 283

70 MILLION BRICKS A YEAR

This Marion 43-M one-yard shovel handles the pit work for a central Ohio firm which annually produces enough brick to build a 200-foot wall 60 times the height of the Empire State building. Two 'round-the-clock processing plants are completely dependent on the output of the shovel. Marionair Control, reserve power and strength to dig Bedford shale without hesitating and crawlers that shed dirt and clean themselves are the features this owner likes. There's a dependable, low-cost, high speed Marion for every clay stripping and loading job. Get the facts from your Marion Distributor or write for literature on Marion ¾ and 1 yard machines.

You get **MORE** *with* **MARION**

MARION POWER SHOVEL COMPANY • Marion, Ohio

A Division of Universal Marion Corporation

Ultrox... opacifiers for glazes of uniform quality

Quality in glazes for structural tile and brick calls for dependable purity and uniformity of its constituents with specific emphasis on the stability, uniformity and dispersability of the opacifier.

M & T CERAMIC PRODUCTS

Glaze Opacifiers
Ultrox
Ultrox 500W
Tin Oxide

Enamel Opacifiers
Antimony Oxide Sodium Antimonate
Zirconium Silicate

Additives for Barium Titanate Dielectrics
Crystalline Stannates of Bismuth, Lead
Calcium, Magnesium, and others

ULTROX Zirconium Opacifiers are highly stable, processed for uniformity under strict laboratory control and prepared under exacting specifications to improve opacity, gloss and texture over a wide firing range. ULTROX compositions can be counted on for the best in glaze quality at the lowest cost.

Known for uniform dependability, ULTROX opacifiers have long been considered the standard for white and colored glazes. These opacifiers are used universally in all branches of the ceramic glaze industry.

For almost 40 years, Metal & Thermit has maintained well-equipped laboratories with experienced staffs for the development of glaze and enamel formulations. The result of recent research on ULTROX opacifiers and their application in all types of glazes is presented in Metal & Thermit's new booklet entitled "ULTROX ZIRCONIUM OPACIFIERS for All Ceramic Glazes". For a free copy, please write.

TIN & TIN CHEMICALS
CERAMIC MATERIALS
ORGANIC COATINGS
WELDING SUPPLIES
PLATING MATERIALS
METALS AND ALLOYS
HEAVY METAL SCRAP

METAL & THERMIT CORPORATION

GENERAL OFFICES: RAHWAY, NEW JERSEY

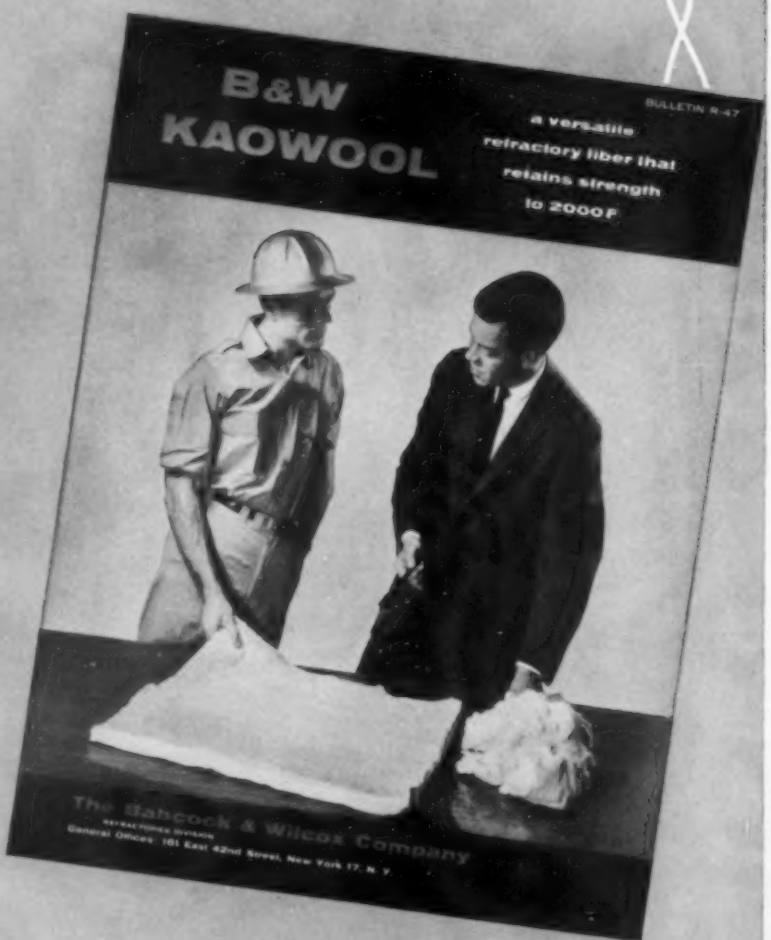
METAL & THERMIT—UNITED CHROMIUM OF CANADA, LIMITED • TORONTO, ONT.

New Bulletin on

B&W KAOWOOL

Gives data on many uses of 2000 F refractory ceramic fiber

B&W Kaowool, the 2000 F ceramic fiber, is now giving long economical service in ceramic applications. For example, B&W Kaowool is used for expansion joints in car tops, as well as for roof and wall sections of ceramic kilns. Write for new bulletin giving helpful data on B&W Kaowool, the easy-to-apply ceramic fiber that withstands temperatures to 2000 F.



B&W REFRACTORIES PRODUCTS:
B&W Alimul Firebrick • B&W 80 Firebrick • B&W Junior Firebrick • B&W Insulating Firebrick • B&W Refractory Castables, Plastics and Mortars • B&W Silicon Carbide • B&W Ramming Mixes • B&W Kaowool

BABCOCK & WILCOX
THE BABCOCK & WILCOX CO.
REFRACTORIES DIVISION
GENERAL OFFICES: 161 EAST 42nd ST., NEW YORK 17, N.Y.
WORKS: AUGUSTA, GA.

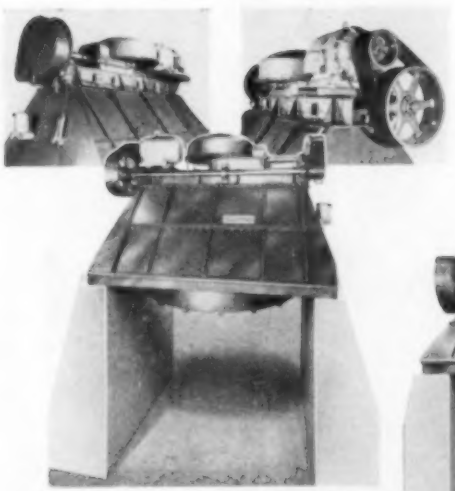
B401C

LOOKED AT FROM ANY ANGLE, MORE THAN YOUR MONEY'S WORTH

THE FAMOUS CHAMBERS SUSPENDED DESIGN

Air-Pressure Control

9' or 10' DRY PAN, No. 70 RIM DISCHARGE GRINDER

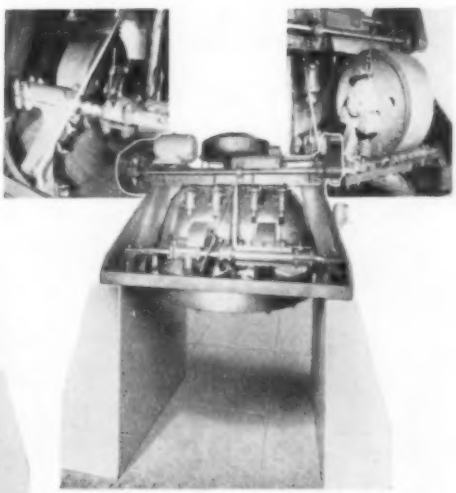


(Left) Surrounding dust-tight enclosure isolates all components of drive from grinding areas, provides convenient attachment to centralized dust-collecting systems.

(Left inset) Dual grease lubrication pumps and distribution valves simplify daily maintenance and insure against premature parts failures. Dust-tight covers completely protect hardened, cut-steel double-gear reduction (20:1).

(Right inset) The completely self-contained 60 to 75 HP drive makes separate foundations and long V-belts unnecessary. High starting torque motors eliminate clutches and subsequent maintenance costs.

(Center) Absence of lower step bearing makes practical direct hoppering to conveyor or bucket elevator. Conventional scrapers and bottom boards reduce over-all installation height, providing same efficiency discharge. Simple foundation piers are money and space-savers.



(Right) The essentials of maximum production from muller-type grinding machines lie in the proper relationship of grinding pressures, depth of material used in pan, and large discharge areas. Unique balance and control available to the operator can only be achieved through the Chambers air-pressure control —2 air cylinders per muller—automatic feed control to the pan, and extra-large screen area (39 Sq. Ft. for 9' pan, 51 Sq. Ft. for 10' pan).

(Left inset) Easily adjustable plow can minimize tire cupping. Dust-tight protective boots and connection with automatic lubrication system keep maintenance costs insignificant. Photo illustrates ¾" steel replaceable curb linings.

(Right inset) Ease of maintenance dramatically illustrated by the rocking action of muller assembly to remove it from pan area. Separate bearing housings (either bronze or anti-friction) make a quick-change assembly a cost-saving reality.

GRINDING PRESSURE RANGE
with Chambers Air-Pressure Control

Air Pressure in Cylinder	75 lbs.	100 lbs.	125 lbs.	150 lbs.	175 lbs.
Total Crushing Pressure on Muller	*11,900 lbs.	*14,000 lbs.	*16,000 lbs.	*18,100 lbs.	*20,100 lbs.

*Effective dead weight of muller assembly is 5,880 lbs.

Write today for further information, without obligation.

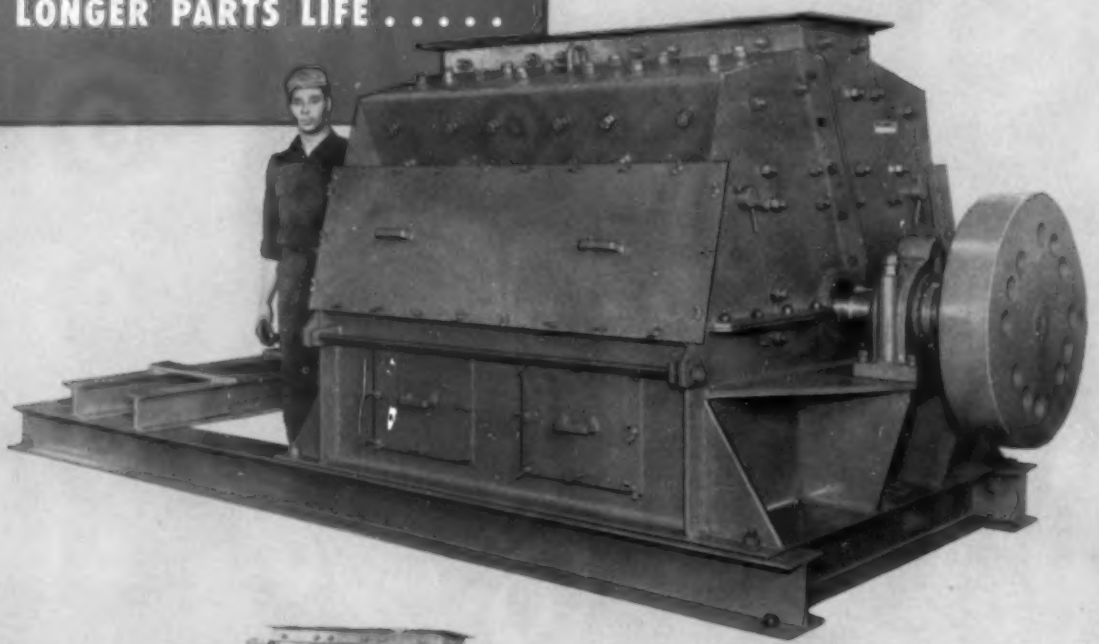
SERVING YOUR INDUSTRY FOR OVER 100 YEARS

CHAMBERS BROTHERS CO. 1857 1958

52nd & Media Streets • PHILADELPHIA 31, PA.

NEW DUAL "2-POINT" ADJUSTMENT INSURES MORE UNIFORM GRINDING, LONGER PARTS LIFE . . . . .

WILLIAMS *Reversible* HAMMER MILLS



Williams Reversible Hammer Mill with cover open. Note these features:

- Super-strong reinforced steel plate frame
- Renewable wear-resistant manganese steel liners
- Heavy duty oversize forged steel rotor shaft
- Anti-friction self-aligning roller bearings in dust-tight housings
- Complete accessibility to interior for quick parts changing

It's another Williams "first"—features not available in other hammer mills—that now makes it possible to maintain the original close clearances of *both* grinding plates *AND* cage sections against the rotating hammers. This easy-to-make "2-point" adjustment, in the most critical grinding area inside the hammer mill, gives absolute assurance of consistently uniform product quality.

In addition to the advantages of the Dual "2-Point" Adjustment, a Williams Reversible Hammer Mill substantially lowers upkeep expense by cutting hammer cost. Hammers can be operated in one direction today and another tomorrow simply by installing a simple reversing switch on the driving motor. Manual reversing of hammers no longer necessary. Grate bars also last longer. The double set of reversible manganese breaker plates, which last twice as long as other types, give four times the service! Maintenance and downtime are cut 50% or more.

Get all the facts about the hammer mill with *ALL* the top features.

WILLIAMS PATENT CRUSHER & PULVERIZER CO. • **2709 N. BROADWAY** • **ST. LOUIS 6, MO.**

WILLIAMS

CRUSHERS GRINDERS SHREDDERS

Oldest and Largest Manufacturers of Hammer Mills in the World

Brick & Clay Record

April, 1958 Vol. 132, No. 4

5 SOUTH WABASH AVE.
CHICAGO 3, ILL.
FRanklin 2-6880

Established 1892.
now in 67th year.

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*Ceramic Engineering Staff.

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BRICK AND CLAY RECORD is indexed by Engineering Index, Inc.

Cancel Insurance - -

And Your House Burns

That is tragedy. But, sure as shooting, the minute you let your insurance lapse, something happens. To build again without insurance is like starting from scratch—building the hard way.

A business is much like a building with the insurance policy on a business being good advertising. Let the advertising lapse and you can depend on your popularity and familiarity among your customers and prospects to wane.

One of our readers recently told us that in '48 when business had a slowdown, he stopped advertising. This was a time when he was getting 18% of the business in his area.

Even though business was down, he dropped from his 18% share to 15% . . . to 12% and then even to 10%. Without advertising insurance, he could not maintain his position in the market.

Then he decided to advertise to regain his position of 18%. Now, ten years later, he is still not back at that level but could only get a 16% share.

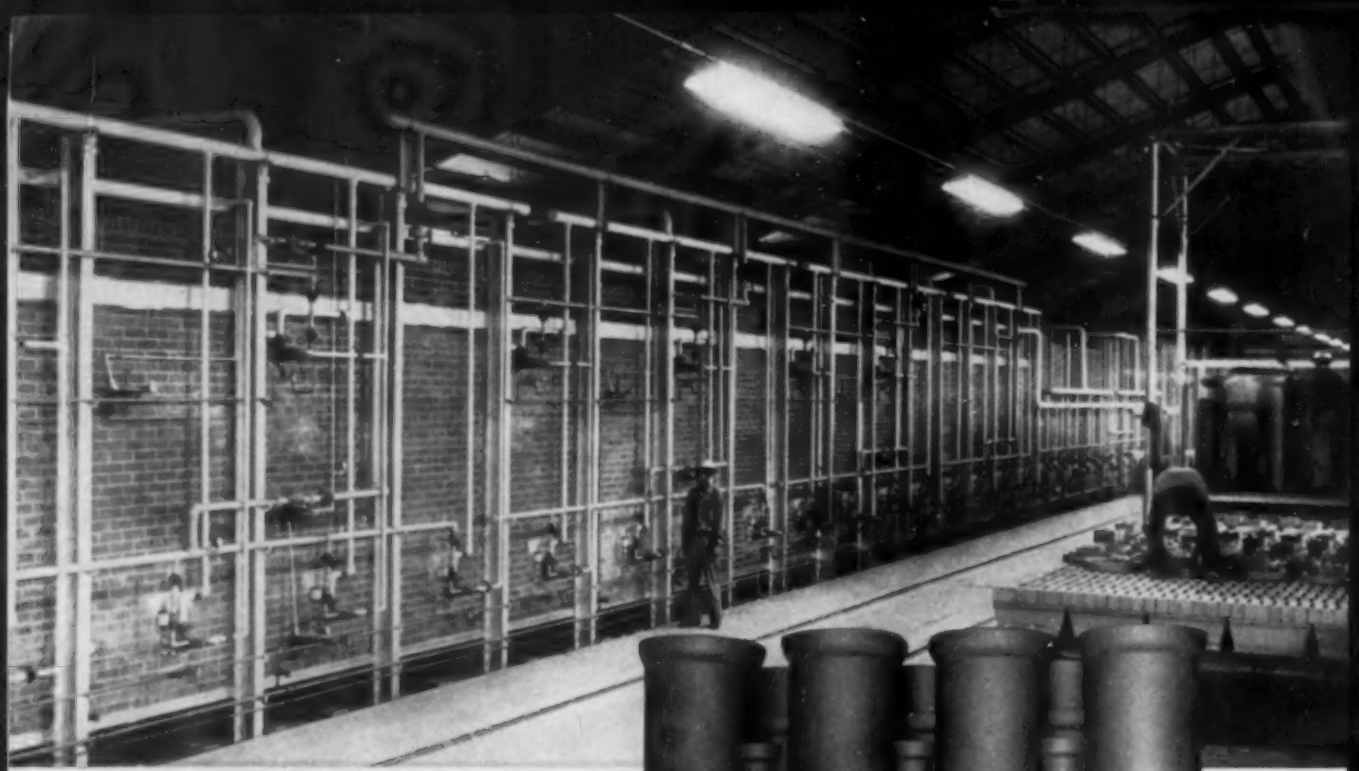
He let his business insurance lapse and the worst happened; now he's rebuilding the hard way.

There's nothing new in this lesson. It could happen in any business —brick, tile, refractories, pipe, lightweight aggregate.

The point is to do what is necessary to maintain your relative position in the market no matter what it takes to do it.

And the next time good business permits you to do so—create a reserve for advertising during bad times. Its like buying stock at the market low.

The Editors



This Big, New
DRESSLER
MULTI-BURNER
KILN

serves PACIFIC CLAY PRODUCTS COMPANY at their Los Nietos, Calif. operations

Burnt ware leaving Pacific Clay Products' new Dressler Kiln

Pacific Clay Products' new DRESSLER Kiln has one of the largest cross sections ever designed for sewer pipe, and presents a remarkable achievement in kiln control—permitting the successful firing of 21" vitrified sewer pipe, 5 ft long, in a kiln only 328 ft in length.

The cars themselves are 10 ft long by 10 ft wide. 16 of the large sewer pipe are accommodated per car, with smaller pieces between, totalling 8 tons of product per car or 100 tons per 24 hours. Loading space is 72" high.

Your inquiries for kiln design and construction on any scale—including precision-controlled salt glazing, if desired—are cordially invited.

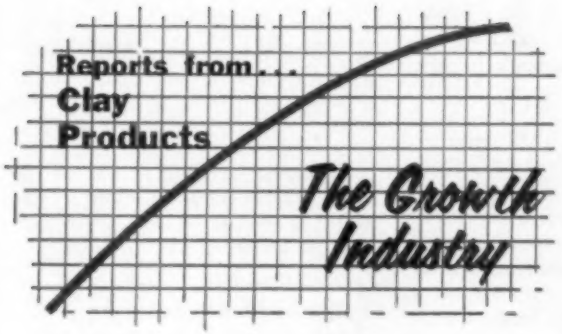
At the ACS Convention, be sure to visit our engineering exhibit... Hotel Penn-Sheraton, Room 463

Swindell-Dressler Corporation provides a complete engineering service for the ceramic industry in the design and construction of new plants, and modernization of existing facilities. Consultations arranged gladly on request.

SWINDELL-DRESSLER Corporation

DESIGNERS AND BUILDERS OF MODERN INDUSTRIAL FURNACES

PITTSBURGH 30, PA.



Intangible . . . But with Impact!

To many people, advertising is one of those elusive, intangible marketing forces. Somehow we know that without it the job of taking a product to market would be a long, lonely task.

Somehow we know that when used consistently and intelligently, advertising creates in the minds of the "market" a positive and definite product image; a feeling of closeness and confidence such as you have for a friend of long standing. Somehow we know that a printed word usually has more believability than the spoken word . . . that when you see it in black and white it must be so. Somehow we know that when a company submits its products publicly to the court of the final consumer, it gains dignity and stature.

Yes, advertising is perhaps as intangible as a handshake; as elusive as a smile or a pat on the back; as immeasurable as the universe. And yet, advertising becomes a definite part of the personal experience of everyone it touches—first as a "whisper" in their consciousness and finally as a persistent "shout" in their memory.

All Start the Same

The strange thing about advertising in publications is that all advertisements start as a blank page of white paper. How effective that page of paper becomes depends upon how it is used . . . what we may have to say to the thousands of potential customers who see it . . . how we have styled it and dressed it up to demand attention.

There have been many studies made to determine the effectiveness of advertising to assist in the building of more effective advertising. None of them are infallible, for advertising is not an exact science. Two and two do not always make four in advertising—sometimes it can make forty.

Perhaps advertising is intangible . . . but, if so, in an intangible way it can make quite an impact.

Perhaps an advertisement is no different from a personal sale contact. It's what you put into it that counts.

T. Faxon Hall, Vice President
Promotion Manager, Walker Manufacturing Co., Racine, Wis.

A Better Block

If we could put several ideas together, our industry could make a fired clay block that would put the cement bonded block to shame. Not only would the industry make a block fully as large as the cement bonded block, but we could make it as cheaply.

Here are the ideas that could make this possible:

First, much of the composition of the block would have to be pre-fired. Reasons for this are obvious: it would not go out of shape in the fire; it would be very accurate in size; there would be little shrinkage in the final firing process so that the final size could be quite easily controlled.

Secondly, a new method of manufacturing would have to be devised that would be some cross between a clay press and a cement bonded block press. Certainly some enterprising machinery manufacturer could work this out.

Think of what advantages such a burnt block would have. It could be scored, it could be faced, it could be glazed, even glazed on two sides. It could have all the colors that brick now have. What more could you ask in a large block size?

The block would have structural strength even surpassing the cement bonded block.

It's true that this idea has been toyed with in the industry, but for some reason there's been no real success in the manufacture of such a block.

One big reason why builders like the present blocks is because they save money with them. One block in the wall is equivalent to many brick; there are fewer joints; a building goes up faster; and in the end, the building is considerably cheaper than brick.

Why not, then, supply a block made of clay that will be identical in size to the present cement bonded blocks and do a better job in construction?

We honestly can't think of one reason why this shouldn't be done right away. Tonnage wise, these blocks could be a tremendous market.

NEWS OF THE INDUSTRY

Bush Brick Adds New Tunnel Kiln

Construction of a new tunnel kiln and related facilities has begun at W. G. Bush & Co., Nashville. The new unit will be a duplicate of one put in during 1955.

Addition of the facility will increase capacity of the plant by 12 million units a year. Completion is scheduled for summer. Total plant capacity then will be 240,000 brick daily.

Included in the new set-up will be a 600′ steel shed; total square footage of 656,000. Construction contractors are Harrop Ceramic Service, with cost estimated at about $500,000 for the entire addition.

Mexico Planning New Plant

In the annual 1957 report sent to stockholders of Mexico Refractories Co., it was said that, "Options have been obtained on three different plant sites for the construction of a completely new plant, but the exact location has not been definitely decided upon."

Such details as freight rates, fuel supply, etc., are under study in relation to the sites.

Capital expenditures of more than $1 million were made by the company in 1957, with a similar figure expected for 1958. The '57 expenditure was for machinery, buildings, warehouses, new clay lands, and reductions of cost in manufacturing and other operations

Kaiser Expands Refractory Research

Research facilities at the Milpitas, California, laboratories of the Kaiser Chemicals Division of Kaiser Aluminum & Chemical Corporation have been expanded to permit consolidation of the division's basic refractory and magnesia research activities.

Frank M. Cashin, vice president and general manager of the division, said the step is part of a new program to organize research into several cooperating sections, each of which will be interested primarily in the special needs of one of the major refractory-consuming industries.

The new program will be directed by James C. Hicks, who has been appointed director of research for the division, with headquarters in Oakland. Hicks formerly was director of refractories research at Milpitas.

Under the program, a team of scientists and technicians will concentrate on the special refractory problems and requirements of the steel industry. Other teams will specialize in refractory research for the glass, cement, and the copper industries. This will make it possible to increase specialized technical service to customers and align product development more closely to the needs of consumers.

In consolidating the research facilities, the division's magnesia research group has been moved to the Milpitas location from Moss Landing, California.

Evar Carlsen Named New Saskatchewan Manager

Evar Y. Carlsen has been named as new manager for the Saskatchewan Clay Products plant at Estevan, according to an announcement by J. H. Brockelbank, Mineral Resources Minister of Canada.

Carleston, a ceramic engineer, has been with the Industrial Minerals Research branch of the Dept. of Mineral Resources since 1955.

Robinson Re-Elected

W. E. Robinson has been re-elected president of Robinson Clay Product Co., Akron, Ohio.

Other officers re-elected included Clark Sutherland, vice president; J. J. Starr, vice president; P. V. Robinson, secretary-treasurer; S. L. Robinson, assistant secretary-treasurer; Powers McLean, clerk.

Texas Vit Remodeling and Expanding

Texas Vitrified Pipe Company, Mineral Wells, Texas, has begun a remodeling and construction program that will include the installation of a new Pearne & Lacy hydraulically-operated clay pipe press.

Addition of the new manufacturing equipment will enable the company to produce its line of vitrified clay pipe in lengths up to five feet, and in diameters up to 36 inches. The new press is one of only four or five of its type in the United States, and incorporates a number of precision features. Present planning calls for completion of the new building additions and first production from the new press equipment by mid-summer.

Excavation of the floor area to accommodate a 25-foot under-floor section of the big press has been completed, and structural steel work is underway for the addition of the 25′ by 100′ top that is being built over the present roof level, raising the overall height of this part of the plant to approximately 50 feet. In the design of the new facilities provision has been made also for space in which additional press equipment can be installed in the future in an adjacent area of the plant.

NEWS OF THE INDUSTRY

Burns Plans $25,000 Clay Block Addition

Burns Brick Co. plans construction of an addition to the company's present facilities to go into full production of brick blocks, according to H. K. Burns, Jr., president of the Macon, Ga., firm.

A permit to construct the $25,000 addition has been obtained. Burns said the new facility will increase the firm's production by 20,000 units per day. Machinery is on order, with some of it already in place, Burns said, with full completion figured for June.

The block is an exclusive Burns development, it is said.

Buffalo Opens Office; Expands Kiln

Buffalo Brick Corp. has opened a new sales and display office at 244 Delaware Ave., the first Buffalo office in the company's history. The Buffalo firm is located in West Falls, N. Y.

Pres. Stephen Elggren has said that increased demand has necessitated a 25% expansion of kiln facilities at the West Falls plant. The enlarged tunnel kiln now has a 50,000 per day capacity.

Roy A. Powell and Melvin Lobsinger have joined Buffalo, in charge of sales to architects and contractors.

Sales, Earnings at High For American Vitrified

Sales and earnings reached an all-time high for American Vitrified Products Co., Cleveland. Sales for 1957 were $10.8 million, compared to a 1956 sales figure of $10.1 million.

Net income during 1957 was $652,893, compared to last year's $605,415. Per share, 1957 net income was $3.87 as compared to 1956's $3.75.

Huntsville Operates Again With New Equipment

Huntsville (Ala.) Brick & Tile has resumed operations after having been closed two months for installation of new equipment.

Changes and additions to the plant have included a clay storage shed, modernization of the tunnel kiln, a brick packaging system and a new loading system.

The tunnel was revamped to provide for more uniform heat. The company is now making a 500-brick package, strapped.

Huntsville had planned a brick show on March 26 at a local hotel.

Locher Brick to Get New $250,000 Kiln

Despite the general business decline, Locher Brick, Glasgow, Va., is going ahead with plans to construct a new kiln at a cost of some $250,000.

Maker of the kiln and completion dates were not given, but C. H. Locher expected completion sometime during this year.

New Detroit Dealer

George W. Pearson, formerly sales manager of Mercier Brick Co., has formed a sales agency, Colonial Brick Co., at 8900 Hubbell in Detroit.

Goodwin Opens New Office

The Goodwin Companies have established a new office for research, engineering and promotion at 513 Foshay Tower, Minneapolis.

The Goodwin group includes Mason City B&T, Des Moines Clay, Redfield B&T, Ottumwa B&T, Oskaloosa Clay and Johnston Clay, of Iowa.

Explorer Satellite Used H-W Launching Pad

The pad from which the earth satellite Explorer was recently launched was paved with H-W Extra Strength castable refractory, it has been revealed by Harbison-Walker Refractories Co., Pittsburgh.

The H-W product is a refractory concrete material composed of sized hard-fired refractory aggregate and binders.

Des Moines Show Features Uses For Brick

Des Moines Brick & Supply Co. used the above display in the 1958 Des Moines Home & Flower Show, held from Feb. 22 through March 2. President Guy G. Zarley of the Des Moines firm wanted to try a new approach this year, demonstrating some of the interesting uses for brick. They used a flower box, complete with flowers, and also a barbeque fireplace; part of the promotion included handing out a brochure on the fireplace unit, aimed at the do-it-yourselfers.

They also attempted something new for them by featuring eye-catching copy on the back drop of the booth. Two aims of the copy were to focus attention on the use of brick and to draw interest to the complete display in the Des Moines Brick & Supply new office.

For further information on promotion activities in Des Moines, see the Letters to the Editor column, page four of this issue.

NEWS OF THE INDUSTRY

Miss-La Association To Meet June 5-7

The annual convention of the Mississippi-Louisiana Brick & Tile Mfrs. Assoc., will be held at the Edgewater Gulf Hotel, Edgewater Park, Miss., June 5-7, according to executive secretary Dean Ramey.

Speakers will include Joe Cermak of SCPI; Director Robert Taylor of SCPRF; John Ware, president of the Mississippi chapter of AIA; Dr. Louis M. O'Quinn, director of business research at Mississippi State College; P. F. Boyer, director of business research at LSU; Gil Robinson, professor of ceramic engineering at Clemson College; and J. J. Svec, assistant publisher of BRICK & CLAY RECORD.

Dunwody Family Takes Full Cherokee Control

The Dunwody family has assumed full control of the Cherokee Brick & Tile Co., Macon, Ga., purchasing the stock held by heirs of S. T. Coleman. Kenneth W. Dunwody, and W. Elliot Dunwody, Jr., made the announcement.

Kenneth Dunwody, president since 1948, was named chairman of the board. Company directors now include Ken Dunwody, W. Elliot Dunwody, Jr., W. Elliot Dunwody, III, Kenneth W. Dunwody, Jr., and B. I. Waller.

CPA Moves

Clay Products Association has moved from 100 North LaSalle, Chicago, to Barrington, Ill., with address of P.O. Box 172, effective May 1.

Region 18 Elects Clemans, Cook

SCPI-Region 18 elected James W. Clemans, of Great Bend Brick & Tile Co., as president, and Dick Cook of Cloud Ceramics as vice president, in their annual election, March 19, in Salina, Kans.

Other officers elected were: executive vice president, H. B. Gilkeson, Lusco Brick & Stone Co.; secretary, Vern Hawver, Humboldt Brick & Tile; Treasurer, R. L. Sheaffer, United Brick & Tile.

Don Ness is regional director, with offices in Wichita.

Adel United to Open

The Adel, Iowa, plant of United Brick & Tile was expected to reopen after being closed since December.

TRI Spring Meet At Homestead, May 8-9

The Spring Membership meeting of TRI will be held at the Homestead, Hot Springs, Va., from May 8 to 9.

The first day's activities will include a board of directors meeting; ladies and men's golf tournaments and skeet shooting. The membership meeting will take place the second day, as will the banquet and President's reception.

SBT Meeting May 16-17 At Point Clear, Ala.

The annual meeting of the Southern Brick & Tile Mfrs. Assoc. will be held on May 16-17 at Grand Hotel, Point Clear, Ala.

The meeting will include two morning business sessions and a get-together party on Friday, May 16th, according to Executive Director James A. Lee.

Thirteen More Salesmen Graduate From SCPI Course

Glissmeyer | Bamford | Keys | Gleason | Henderson | Karnick | Paugh Jr.

Mabley | Duke | Tabb | Hillenbrand | Higbee | Jones

Thirteen brick and tile industry men have completed special five-week Sales Engineer Training classes at SCPI in Washington. One group of eight and one group of five took part in the two classes.

Graduates are: Robert L. Bamford, Robinson Brick & Tile; Theodore Duke, Region 5 engineer in St. Louis; Art Gleason Jr., Henry Brick Co.; Henry B. Henderson Jr., Big Run Coal & Clay Co.; Emile R. Tabb Jr., representative of Miss-La Brick & Tile Mfrs. Assoc.

Other graduates include: Darro H. Glissmeyer, Interstate Brick Co.; Robert E. Higbee and Lawrence W. Paugh Jr., Washington Brick Co.; John G. Hillenbrand, General Shale Products Corp.; William S. Jones, Boren Clay Products Co.; John Karnick, Natco Corp.; James G. Keys, Glen-Gery Shale Brick Co.; Thomas Mabley III, SCPI.

Stark Engineer D. F. Albery Dies

D. F. Albery, 70, chief ceramic engineer at Stark Ceramics, Inc., Canton, Ohio, died March 9.

Albery had suffered a stroke on March 6 and was taken to a Canton hospital.

He had been employed as a ceramic engineer since 1909 and had been with Stark the past 18 years.

He was an alumni of Ohio State Univ. and a Sigma Chi member for 50 years.

W. H. Williams, Stark vice president in charge of sales promotion, has said, "Our entire industry and especially we at Stark Ceramics, Inc., will miss the friendship of Mr. Albery and his excellent technical ability . . . I am sure (we all) are aware of his work and accomplishments through the establishment of the Ceramic Societies and his work with them."

John Milliken, who has been with Stark for a year, will succeed Albery in the ceramic department.

Sales Up, Income Down At Mexico Refractories

During 1957, net sales of Mexico Refractories Co. were $20.9 million with net income of $2.4 million or $2.90 per share, according to preliminary unaudited figures.

These figures compare with 1956 net sales of $20.1 million, a net income of $2.5 million, or $2.96 per share.

A quarterly dividend of 30c per share has been declared and was to be paid March 10.

Basic, Inc. Sales, Income Drops

Basic, Inc., reports that 1957 net income was $1.3 million, equal to $1.72 per common share, compared to 1956 figures of $1.7 million and $2.12.

H. P. Eells, president, states that sales and earnings from the Basic refractory division maintained at peak levels in 1957, and that the income decline was due essentially to losses incurred in the recently acquired building products division.

Wm. Stoner Dies

William M. Stoner, 77, of Western Brick & Supply Co., Lincoln, Neb., died recently. President Stoner had been with the firm since 1917.

Two Denver B&P VP's Retire

Two vice presidents of Denver Brick & Pipe Co. have retired. They are Charles H. Treusch, vice president, production, and Richard J. Osenbaugh.

At the Denver B&P annual meeting, William J. Geddes was re-elected president-treasurer. William G. Temple is executive vice president; George Doering, vice president-comptroller; Kevin Croke, secretary.

ANOTHER **ALLIED** KILN INSTALLATION

DENVER BRICK

& Pipe Company • Denver, Colorado

Well known throughout the area for high-quality building brick, tile and sewer pipe, *Denver Brick & Pipe Company* is also especially remembered by visitors for the beautiful setting in which the plant is located. To the south is the skyline of downtown Denver, to the west a breath-taking panorama of the Rockies. Another favorite "view" of the *owners* is sewer pipe moving smoothly through their new ALLIED Kiln.

FERRO

Allied Engineering Division

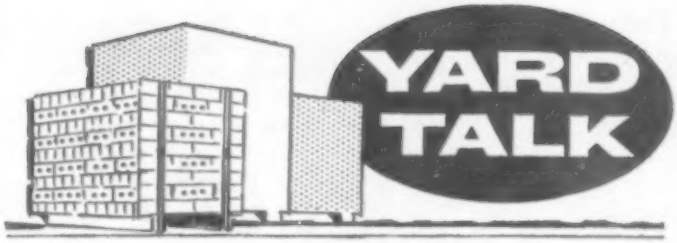
FERRO CORPORATION

4150 E. 56 STREET • CLEVELAND 5, OHIO

ACCURATE
HEAT
MEASUREMENTS
with
the improved
PYRO
OPTICAL
PYROMETER
Always gives quick, sure, accurate temperatures. Self-contained and direct-reading. Stock ranges 1400°F to 7200°F.

Send for FREE catalog No. 85.
and
the improved
PYRO
RADIATION
PYROMETER

Just press a button for instant, accurate spot temperatures. No thermocouples, lead wires, or accessories needed! Stock ranges 1000°F to 3400°F.
Write for FREE catalog No. 100.
PYROMETER
INSTRUMENT
CO., INC.
BERGENFIELD 15, NEW JERSEY



Remember the series of articles we ran last summer by William Powell of Columbia Brick & Tile, of Missouri? This company has come a long way, to judge by their production estimate for 1958. Fred Kennedy, president, estimates that 1958 production will be 7½ million brick. Production five years ago was 4½ million. Kennedy gives credit for the increase to such things as new brick machine, cutter, two gas shovels, six lift trucks. Increase is solely due to mechanical improvements, they say.

Clay City Pipe Co. recently held an open house to promote the opening of their big new Uhrichsville, Ohio pipe plant. The old plant was destroyed by fire in June, '56.

There's a new clay products group in Columbus, Ohio, called the Columbus Clay Products Assn. Members are Claycraft, Colonial Building Materials Co., Columbus Builders Supply Co., Columbus Coal and Lime Co., Galena Shale Tile & Brick Co., General Clay Products Co., and Ironclay Brick Co. Early activity by the group was the presentation of the traveling SCPI-NAHB sales tour.

Oskaloosa (Iowa) Clay Products has introduced two new products during the 1957 period, including a light buff. Name of this is Buff Triple-Tex. The company is also evidently using one of the Rockfacer machines. The company aim during 1958 will be a more efficient operation from the manufacturing end, according to Wayne Barrett, general manager.

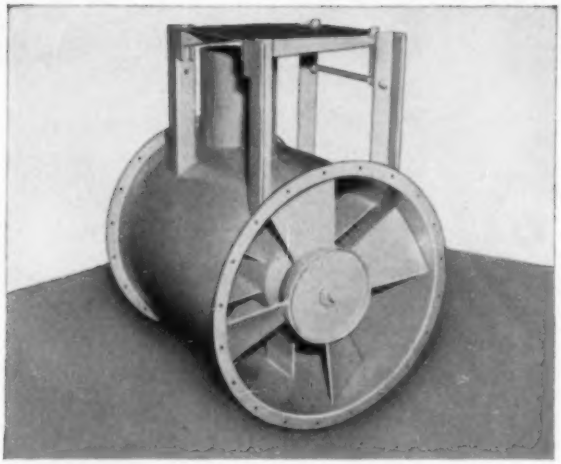
There's been quite an expansion program at El Dorado (Calif.) Brick Co. during the past months, with one result being a year-round operation instead of seasonal. Owners J. S. Beebe Sr., J. S. Beebe Jr. and Wallace Luttrell purchased the plant some six months ago. Output lately has been running about 30,000 daily with a planned step-up to 50,000 soon. New machinery and brick making equipment is being installed, with completion in early April. Part of the construction includes a 200,000 brick drying shed; building of a new office; concrete storage and shipping areas; three new fork trucks for handling. Production has tripled under the new owners; roman, norman, pink, salmon, buff, brown and other shades are being made, with pastels to come, says superintendent of sales-operation A. O. West.

Speaking of new brick lines, Wadsworth (Ohio) Brick & Tile displayed a new textured brick at a local Home & Flower Show. Name of the brick is "#7 Wire Cut Desert" sand; in pink, tan, beige, with textured sand overlay.

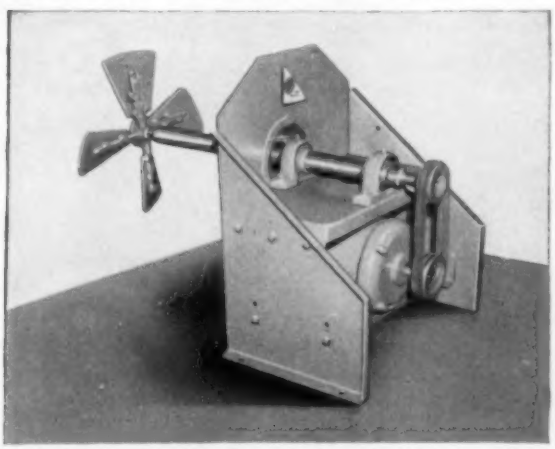
And other new product . . . Richmond (Calif., not Va.) Brick Co. has developed a special new acid resistant brick for the chemical industry. They've been shipping brick as far as Los Angeles. The company is also experimenting with a large size brick block, designed for commercial and public buildings. Plant has been working at capacity and things for '58 appear to be good, according to manager C. L. Sevy.

Another company that operated at capacity during '57 was Donley Brick Co., of Pennsylvania. They are making an acid-resistant brick for building and radial chimney brick. Last year J. G. McIntyre was appointed general manager; he had been with General Refractories. President is Clarence Shepherd; company is a division of North Star Coal Co. During the last year the company has been completely electrified and capacity expanded about 20%. Improve-

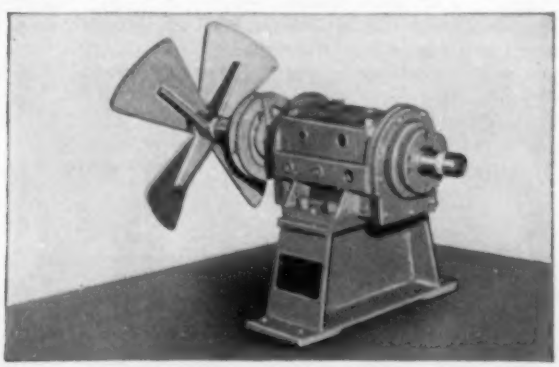
(Continued on page 90)



15,000 CFM AT 360° F. is the job these special "Buffalo" Type "B" Tube-Propeller Fans are doing at a large brick company. Installed between inner and outer walls of kiln, they are driven by V-belt thru fairings, with motor outside of kiln.



TUNNEL KILN MANUFACTURER BUILDS these "Buffalo" Type "NV" units into his package kilns used throughout the country. Drive is outside wall, long shaft extends into kiln. Wheel is properly shrouded within kiln to circulate hot air.



HANDLING AIR UP TO 1600° F. are many of these special stainless steel "NV" Fans, at left, used by leaders in the refractory field. Heat slinger on shaft next to "NV" wheel reduces shaft heat and bearings are rigid-type, water-cooled, with special labyrinth seals to eliminate oil leakage and fire hazard. A good example of how "Buffalo" engineers a fan for your special job.

KILN RE-CIRCULATION MADE TROUBLE-FREE BY THESE SPECIAL-DESIGN "BUFFALO" FANS

Shown here are some of the many specialized "Buffalo" Fans providing dependable air circulation in severe kiln applications. These are designs built around "Buffalo" Type "NV" Heavy-Duty Propeller Fan Wheels. Shaped for maximum air handling at slow speeds, die-stamped from heavy plate, the blades are welded to rugged spiders — efficient and durably built to the "Q" Factor* standard. "Buffalo" Centrifugal Fans are also handling hot air in a variety of kiln applications, and "Buffalo" "MW" Exhausters are supplying induced draft for lime kilns — all with a minimum of maintenance and a high level of efficiency. Write for Bulletin FM-2345 and recommendations on the fan engineered for your job!

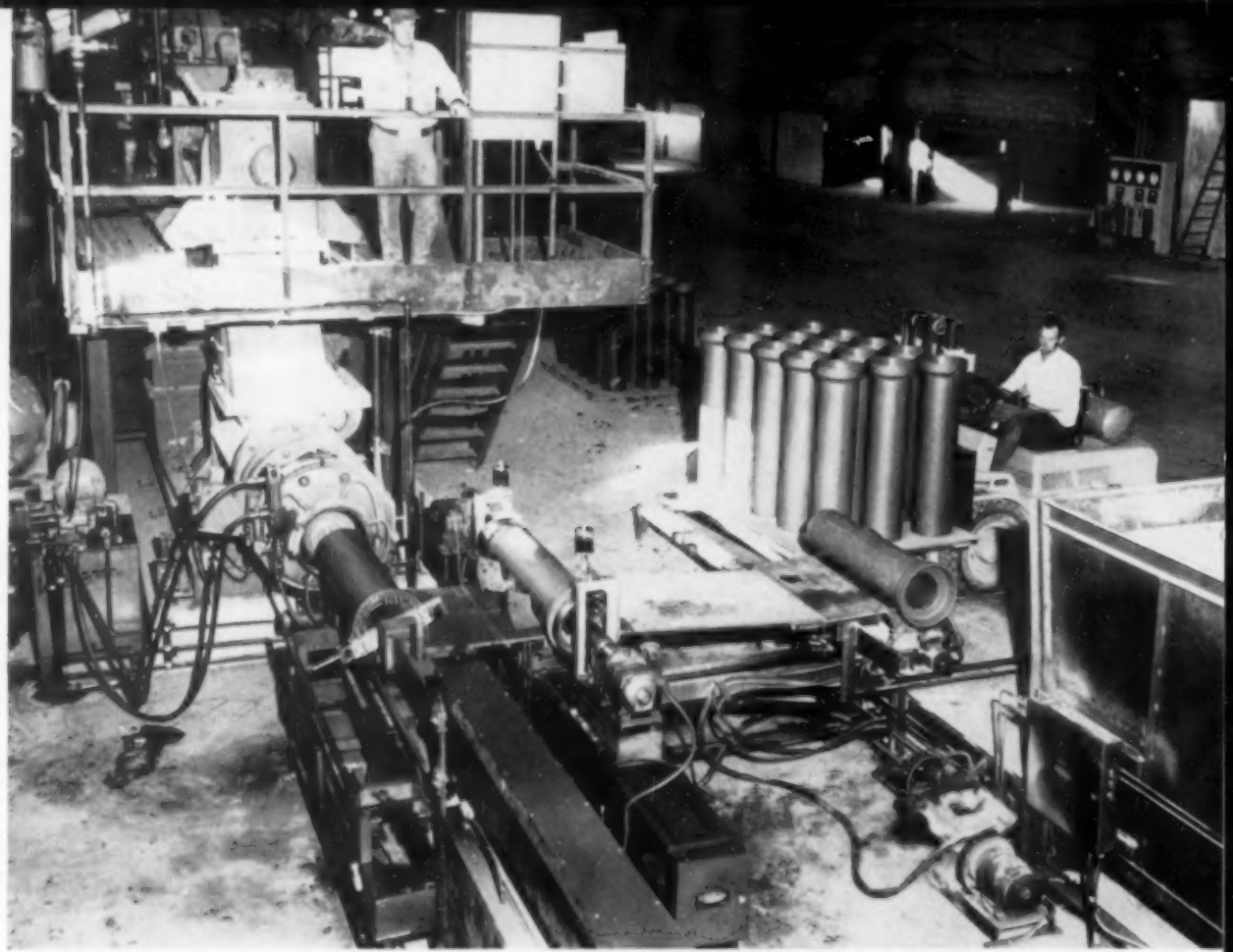
**The "Q" Factor — the built-in Quality which provides trouble-free satisfaction and long life.*

BUFFALO FORGE COMPANY BUFFALO, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

"Buffalo"

VENTILATING AIR CLEANING AIR TEMPERING INDUCED DRAFT
EXHAUSTING FORCED DRAFT COOLING HEATING
PRESSURE BLOWING



Pressing operation requires only two men at new plant.

Automation Featured in $5 Million Plant Now in Operation

New Gladding, McBean plant uses automatic equipment, methods; 420′ tunnel kiln, two-man pressing are features.

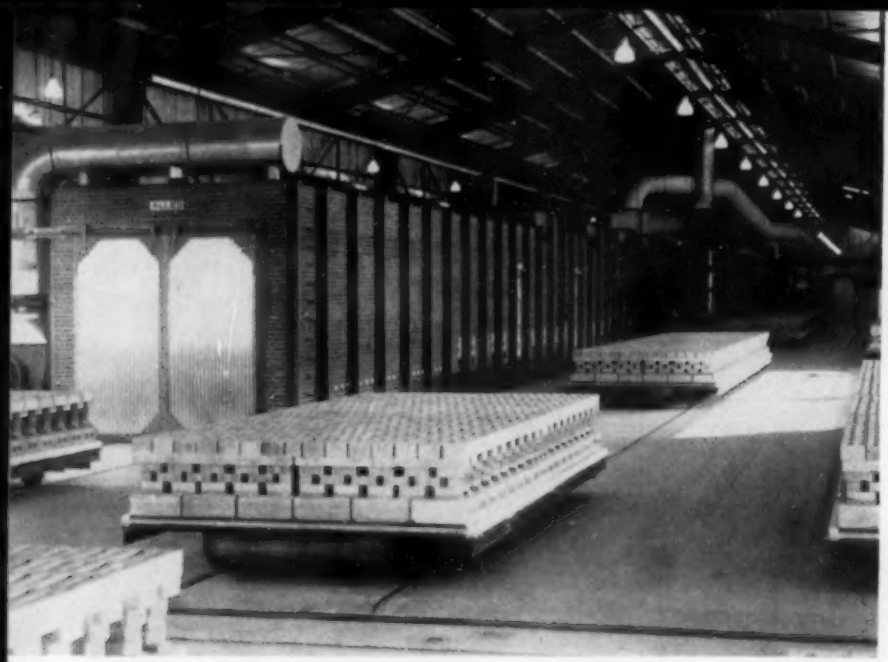
Laid out and engineered to make maximum use of automatic operation, the $5 million Corona, Calif. plant of Gladding, McBean & Co. recently went into full-scale operation.

All mixing and grinding processes are virtually automatic, as is bin storage. Used here are electronically controlled vibrating feeders; electrically heated vibrating screens; seven 150 ton storage bins; all controlled by one man at a master control panel.

Two men operating pressing, one at the control board and the other removing loaded pallets. Production rate is 8″ pipe, 40″ long, at six pieces per minute. All offbearing and trimming operations are automatic.

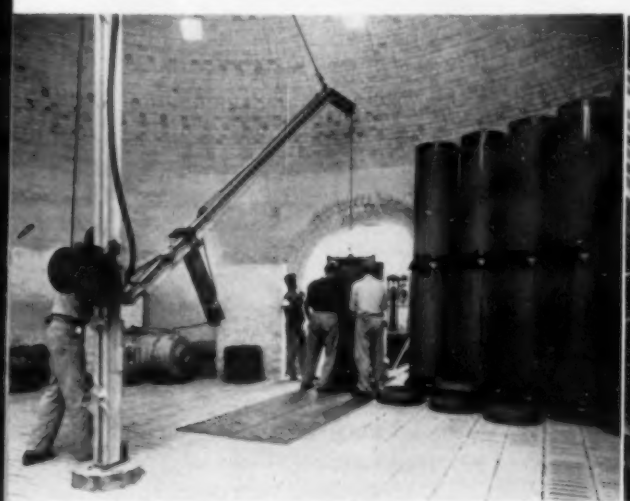
Sixteen humidity type dryers are used with a drying cycle of from 12 to 120 hours.

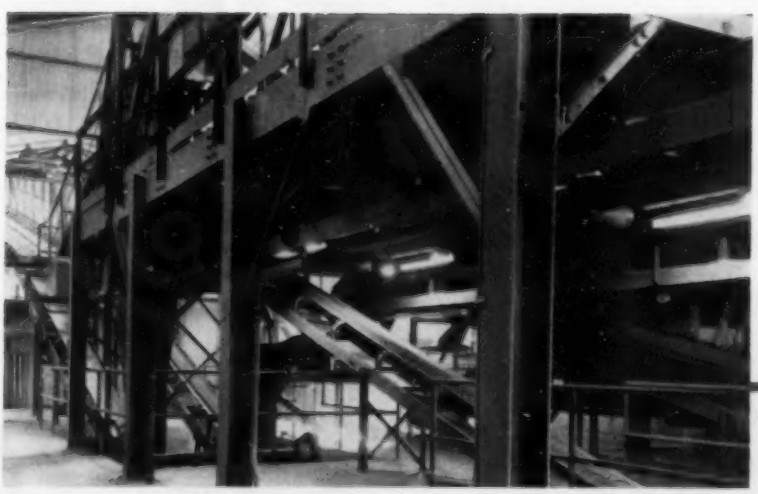
Eight 40′ periodics, 16 humidity dryers are used.



Tunnel kiln at left is 420'; uses 10x10' cars, with capacity up to 18" diameter pipe.

Average tonnage per cycle in periodics is 150 tons. BELOW at left is kiln loading equipment; at right, one man control of grinding, mixing, storing.





A 700' conveyor system is used to carry ground clay to any one of seven 150-ton storage bins; entire operation of mixing, grinding, storing is one-man control.

A NEW CONCEPT IN KILN DESIGN

The ideal way to expand plant production . . . or modernize facilities!

This load is constructed so that it may be loaded and unloaded by lift fork. It may be dried on dryer cars or directly on the kiln car.

FAST • EFFICIENT
CLIPPER
• LOW COST •

Recent Ohio Kilns installed on Structural Clay Products:

Orrville Tile Company, Drain Tile.
Bowerston Shale Company, Brick.
H. B. Sipple Brick Co., Brick.
Majenica Tile Company, Drain Tile.
Owensboro Brick & Tile Co., Brick.
Clay City Pipe Company—Sewer Pipe.

Here's What It Will Do For You . . .

- **Fire from 10,000 to 25,000 bricks/day depending on the clays you use, the capacity you need.**
- **Require a minimum of plant changeover — you don't have to build a new plant, or completely rebuild your old one.**
- **Provide you with all the advantages of tunnel kiln firing — at a cost that even the smallest plant can afford.**
- **Clipper kilns can be built for ¼ to ⅓ the cost of conventional tunnel kilns. Used in multiple banks they afford the ultimate in flexibility and efficiency on large production or small.**

Check for yourself . . .
write or call today!

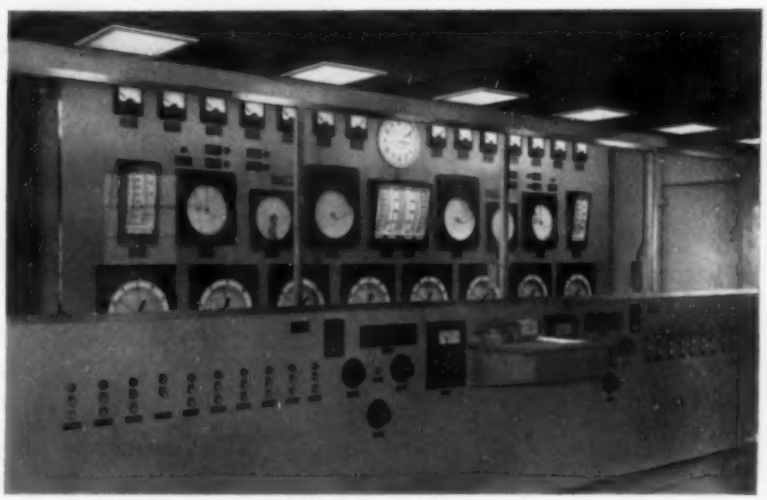
OHIO KILNS
GRANVILLE, OHIO • JU 2-2571

Material Service Opens Materialite Plant

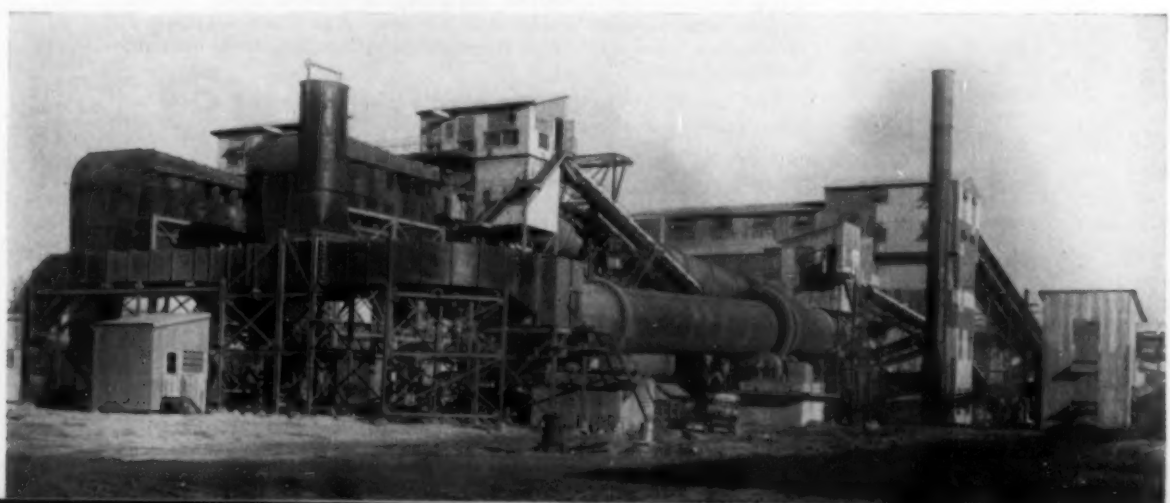
Material Service Corp., of Chicago, has announced completion of a new plant to manufacture Materialite, following several years of research and two years of construction. The new plant is near Ottawa, Ill., located on the Rock Island Railway and the Illinois water way.

The new type of aggregate seems to have unusual properties. Walter C. Voss, professor emeritus, Architectural Construction and Materials, of MIT, has said: "Extensive tests conducted under my supervision by . . . Armour Research Foundation . . . on the properties of concrete made with the lightweight aggregate produced by your company, convince me that it is the most unusual lightweight aggregate which has come to my attention."

"The fact that a 5-sack mix tested uniformly well over 3000 p.s.i. while the air-dry weight of the concrete was less than 85 lbs. per cubic foot is very unusual . . ."



Another unusual feature of the operation is that, differing from some midwest aggregates, all crushing is done prior to expansion. Several hundred acres of shale land adjoin the large new plant.



We Asked Our Readers
About Our Industry's Future

B&CR Readers Expect More Business, Plan More Ads, More Color, More Research

An industry is not one massive unit . . . rather, it's an assembly of small-to-large units, tied together by their products and production methods.

When you want to know what an industry is doing today, and what it expects to do in the future, you have to go right to the individual plants, get their ideas, and then coordinate these opinions into a picture of the industry.

And that's just what we did. We wanted to know what business would be like in this year and years ahead; whether advertising budgets would be expanded, cut down, or left the same; whether capital expenditures would rise; whether plants are working on new colors, new sizes, new products; whether they favor research for their industry.

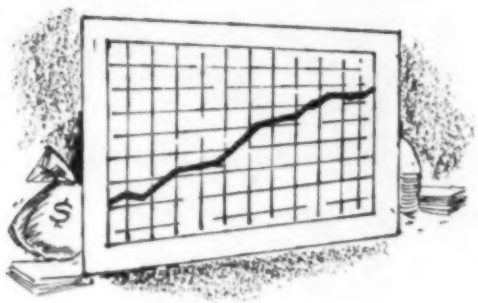
We found out the answers, in an exclusive survey that, by any standard, drew unusually heavy response.

Some of the answers frankly surprised us, either by uniformity of opinion or by a reversal of some commonly held ideas. For just one example, despite all of the predictions, forecasts and mutterings of doom, business isn't as slow as the recession talk would have you believe. Better than 80% of our readers expect business better, or as good, as last year. Something like 60% plan capital expenditures this year. Most, by a huge amount, plan an equal amount, or more advertising than was used last year.

To see what we found out about our readers' opinion and predictions, see the following pages:

86% Feel Sure Future Volume of Industry To Increase

WHAT B&CR READERS SAY:

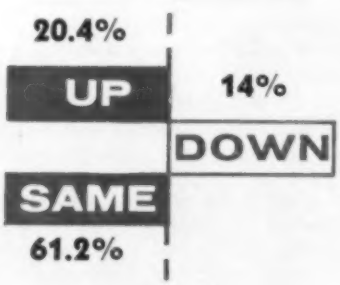


BRICK & CLAY RECORD has consistently felt that we and our readers believe that the future of this industry is fine, particularly over the long period of time.

However, like many others we've had some doubts about business conditions today, in 1958. For these reasons, one of the most surprising—and pleasing—results of our survey was the highly optimistic showing of brick and clay plants concerning business today, in 1958. By far the bulk of our readers (better than 61.2%) felt that business would be as good as last year; another 20.4% felt that their business would be better than last year. This means that a total of roughly 81.5% of those answering felt that their business would be at least even with, or better, than last year.

Only 14% felt that their business sales would be off from last year.

What do you think your sales will do in 1958 compared to '57?



Taking our readers' predictions for the coming ten-year period, the optimism is, as we expected, even greater. Of those surveyed, 224 people, or 87%, felt that business would go up, compared to some 13% who felt that business would go downwards.

Over the next ten years, do you think the volume of the industry will change? Up or down?

Up	*Down*
86.2%	**13.8%**

Interestingly, there were some apparent contradictions in the individual responses. A few companies expected a business increase this year, but a drop in the years ahead, which runs counter to general expectations of the industry.

Although the following section has little real value statistically, the editors were curious to see how much the readers expect current and future business to rise. To find the answer, we broke down those who reported the percentages up-or-down that they anticipate. Actually, our questionnaire required nothing more than a check mark by "up" or "down" but many took the effort to guess a percentage.

To be absolutely fair about the following figures, we'd like to stress that they represent only about a third of the entire response, and that we offer these figures only for your interest.

Taking first anticipated business for 1958, some 88 brick plants expected their business to be greater than in '57, comparing this to 27 who felt that their business would be worse.

The brick plants settled most heavily on the area between a 10% and 15% increase this year. By figures, 20 said up 5%; 30 said up 10%; 6 said up 15%; 13 said up 20%; 5 guessed up 25%; 3 guessed up 30%; 5 expected 50% increases; and 1 estimated a 100% increase. On the reverse side, business drops were estimated most heavily at 10% off, with 10 people guessing this. Some 3 people figured a 15% drop; 4 figured 20%; 3 estimated 25%; 1 chose 30%; 6 picked 7% or under.

Turning now to the future percentages of increase or decrease, most felt that the industry would go up from 10 to 25%. Thirty people chose 10%; 12 picked 15%; 34 estimated 20%; 20 chose 25%. In the higher percentages, 5 believe the industry will go up 50%; one picked 60%; 3 readers feel the industry will increase 100%. All told, of those picking out a percentage, 113 felt the industry will increase, compared to only 10 who felt there'll be a decrease.

Of the latter group, most estimated a 10 to 15% decrease, with only two readers going for 20% or 25%. One of the ten felt the decrease will be 5%.

Continued on following page

Again, to be completely safe, we'd like to re-emphasize that these figures are only an incomplete part of the total survey, but it's highly interesting to see just what the size of increase or decrease is to be, according to our readers.

Not as optimistic about 1958, as brick plants, were those in *refractories*. Here, 22 guessed a downward percentage this year with half figuring a 10 to 15% decrease; the other half of these going from a low of 2% to a high of 50%. On the other side, five expect better business in 1958.

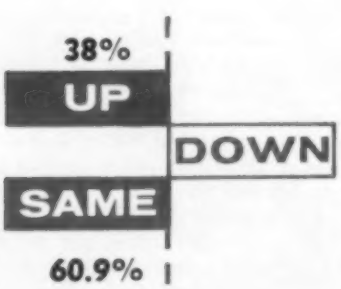
The percentage guesses for the future completely reverses the group of refractory industry responders. A future increase was picked by a ratio of better than 20 to 1. The percentage guesses ranged pretty evenly from 5 to 30%; other estimates were from 35% up to 100%.

Another statistical swing was made by the *pipe people*, with about a two-to-one ratio of those picking more 1958 business as against those figuring for a drop. Only three percentages were chosen as the amount of increased '58 business; evenly split were 5%, 10% and 20%. No other percentage of increase was given. On the other side, decreases were figured most heavily as from 10% down to 3%; two readers went much higher, one for 35%; one for 60%.

Speaking of their future hopes, the *clay pipe people* were again highly optimistic, along with their refractory and brick brethren. Better than 96% feel the industry will go up. Most chosen percentages of increase (split almost evenly) were 10%, 20%, and 25%. Three readers went as high as 50%, one as high as 35%. Because negative response was so low, an uneven picture of the decrease anticipated is given; according to response, those who believe in a downward turn in pipe settle on 25%.

When, in view of predictions of business increase or decreases, we asked our readers whether their sales force would stay the same, decrease or increase, the figures reflected very well the business predictions.

Will you use more or fewer salesmen in 1958?

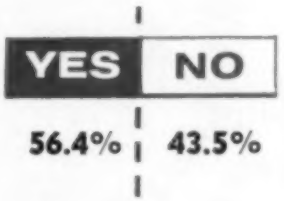


Of all our readers, some 61% felt '58 business would be the same as last year; some 60.9% plan to use the same number of salesmen. Reporting an expected increase in '58 business were 20.4% of readers; planning to use more salesmen in '58 were some 38% of our readers. Only a negligible percentage planned to use less salesmen.

These figures, regarding sales forces, pretty well reflect today's interest in more and better salesmen in a time of increasing competition.

There was a less clear-cut opinion on how stable prices will be this year. More of the total response (56.4%) felt prices would be stable, but a group totalling 43.5% felt that prices would be unstable.

Do you think selling prices will be more stable in 1958?

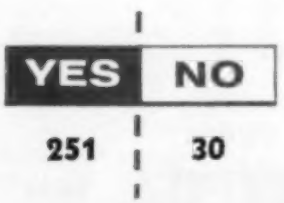


In the individual industries (since the total survey heavily reflects brick plant response) 55.5% of the *pipe people* think prices will be less stable in their industry; reversing this, *refractories people* felt, by two to one, that prices would be stable in their industry.

What kind of distribution do you now have?

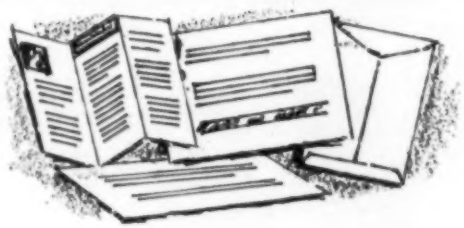
Across the brick, refractories, pipe and related clay products industry, most of our readers use plant salesmen (251 report this) with 166 using dealers, 168 using distributors and dealers. Of course, there's some overlapping among these figures with some using only one of the three, others using all three, a combination, or unlisted outlets.

Are you happy with your method of distribution?



When we asked if the readers were happy with their present method of distribution (whatever it might be at present) a solid 86.5% said that they were currently happy. By total of individual response, this worked out with 251 readers happy, compared with 30 who were unhappy.

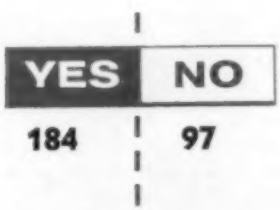
WHAT B&CR READERS SAY:



95% Plan Same Amount Or More '58 Advertising

With advertising and promotion increasingly important in a time of greater competition, we wanted to know how our readers felt about some aspects of these related subjects.

Is national cooperative industry advertising helpful to you in your sales effort?

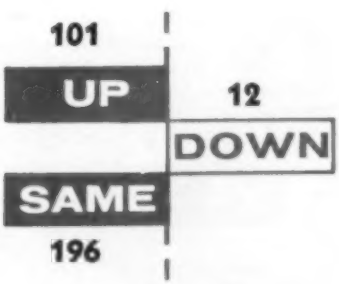


Over the entire survey, those voting in favor of cooperative industry advertising ran two-to-one over those who disapproved of this advertising. Here, again, this total figure primarily reflects the attitude of the brick industry.

When we look into the feeling of those of the *refractory industry*, it's a different picture. Almost 57% felt that cooperative industry advertising was not particularly helpful, with, of course, something like 43% feeling the opposite.

Turning around again, the *clay pipe* people evidently feel, by 8 to 1, that the cooperative advertising is helpful. On a proportion basis, the pipe people were by far the most enthusiastic about this form of advertising.

Do you anticipate any changes in your own advertising program?

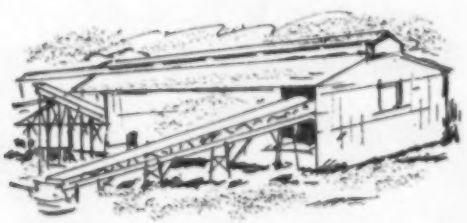


The figures, industry by industry, reflected the total survey when we wanted to know whether the clay products industry planned to advertise more, less, or about the same. Of those answering, 196 readers planned the same amount of advertising; second place went to those (101 readers) who planned more advertising; only 12 people of all those answering planned less advertising in the future. Taking these on a percentage basis, better than 96% of our industry plans to do as much, or more, advertising in the future.

Although we can't prove the validity of this point, there's a pretty close relationship shown between the up-down-same of the sales force planned, and the up-down-same of advertising. Some 60% plan the same amount of salesmen; 63% plan the same amount of ads. Similarly, 38% plan more salesmen and 32% plan more ads; for less salesmen and less ads, totals are negligible. And, these advertising predictions came reasonably close to the estimated up-down-same predictions for 1958 business.

WHAT B&CR READERS SAY:

60% Report Plans For Capitol Improvements in '58



Heavy growth has taken place in our industry in recent years (proof of this is shown in part by the three picture stories on new plants in this issue) with the growth involving everything from new equipment to entire new plants, remodeling, modernization and expansion.

Do you anticipate capital improvements in 1958?

YES	NO
185	123

That this period of growth still continues is illustrated in our survey. Better than 60% of those asked say that they'll spend money on capital improvements in 1958. By figures, this means that 185 readers report these plans, compared to 123 who plan no capital improvements.

Of those planning the work, 71 plan to add less than $25,000; second place goes to those planning more than $50,000, with 65 checking this category; third place goes to under $50,000 but more than $25,000 with 49 readers in this category.

These figures don't carry through, however, in the individual industries of pipe and refractories. In *pipe company* response, three times as many plan over $50,000 improvements as in the under $50,000 class. In the same category of response, pipe people plan improvements in a ratio of 8 to 1 to those who plan no improvements. In other ratios, it's a 12 to 1 ratio between those who plan over $50,000 and those who plan under $25,000 . . . and a 4 to 1 ratio between those who plan over-50 and those who plan under-50 but over-25.

The figure isn't quite as high for the *refractories industry*, but still 72% plan capital improvements, with the greatest number (29%) planning to spend more than $50,000; some 27% planning to spend under $25,000; another 18% planning to spend more than $25,000 but less than $50,000. To put this refractory response in a capsule, more people plan to spend $50,000-plus than plan to stand pat.

Of course, this group of people, who plan to stick with what they've got, have no way of telling us in the questionnaire why they're sticking with their present set-up. There have been several totally new refractory plants opened recently who would have no need yet for capital improvements. In a small sample, such as the refractory category in this questionnaire, just a few of these new plants checking the "no capital improvement" space could boost this percentage out of all proportion. All quibbles aside, the growth trend in refractories seems to be continuing.

Do you anticipate higher labor costs in 1958?

YES	NO
249	66

We felt sure that labor costs were unlikely to head downward; sure enough so we didn't bother to ask our readers if they considered this a possibility.

Just exactly an even 80% of our total survey showed that readers expected labor costs, across the industry, to go upwards. Breaking this down by individual response, 249 readers expected an increase with only 66 feeling that labor costs would stay the same.

In the *clay pipe* segment of the industry, opinion that labor costs would rise was even greater, with a ratio of 19 to 1 predicting an increase. The *refractories industry* came closer to the average of the total response; this industry felt, by 82.5%, that labor costs would go up.

Interestingly enough, when we asked if the readers felt that some additive could improve their raw material, the total survey responded with almost the same figures as the above. Some 228 people, about 75%, felt their material could be improved. The same total that predicted a labor cost rise, 66 people, felt that additives wouldn't help them—although we don't know whether this means they have "perfect" clay or just adequate clay. As a note of interest, speaking of additives, one reader said in despair, "not likely as we've tried everything that has come along."

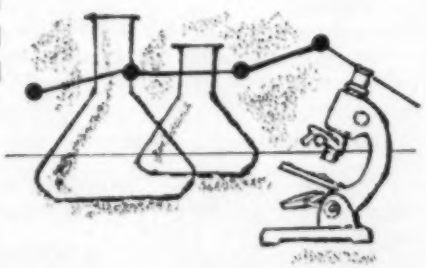
A little higher percentage, 82%, of the clay pipe people felt that additives could help their clay.

Is it conceivable that your raw materials could be improved by the use of additives other than those you are now using?

YES	NO
228	66

WHAT B&CR READERS SAY:

40% Plan To Introduce New Colors in '58; Favor Industry Research



Research is, in some ways, a newcomer to our structural clay products industries, being further advanced in parts of the industries than in other parts.

Regardless of this, it would seem that the industry is wholeheartedly in favor of industrywide research. To back this up, 284 of our readers feel that industry-wide research is worthwhile compared to only 17 who reported unfavorably. By percentage, this means almost 95% of total response was favorable to industry research programs.

According to the response from readers in the *refractories industry*, they like industry-wide research by a ratio of 30 to 1. Since there is no industry-wide research being done by the refractories industry, this would be an evident indication that a good share of the industry would like to have such a program.

The *clay pipe* people, who in mid-April opened a new research laboratory, had no readers, in our response, who weren't in favor of industry-wide research. However, there was one "yes and no" and one question mark, indicating at least two members of the industry who are doubtful of the value of such research. Overall, it's obvious that the pipe people also are strongly in favor of this type of research.

Very nearly as many people in the brick industry plan to add new colors and sizes as plan to keep what they have in their present line, to judge by results of our survey.

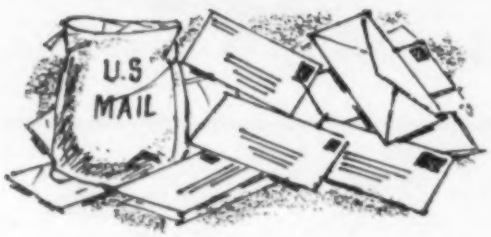
Better than 41% of those responding to the survey plan to add new colors to their line. Actually, this figure is rather low in a certain sense, since there are some products included in these figures which don't bear changes in color or addition of color. But, at the lowest, 109 readers out of 265 responding plan to add colors.

Almost as many, of those responding, plan to add new sizes in 1958, with 38% planning to do this. By individuals again, this means that 111 answered this question affirmatively, out of a total of 284. With the people in the pipe industry, where there are trends to larger sizes, etc., better than 45% plan to introduce new sizes, almost equalling the total of those who plan to stick with their current line.

When we asked if the readers have "considered" enlarging their market potential with new colors and/or products, something like 76% reported that they have considered such action. This would seem to indicate that, while somewhere from 38 to 41% are planning to take such a course, approximately another 30% have considered it . . . and either discarded the idea, postponed it, or might do it in the more distant future.

Or, if you'd like to take it from another angle, it evidently means that less than a quarter of the industry doesn't plan to do anything about their line of products in color or size, including those industries where these two aspects aren't of importance.

WHAT B&CR READERS SAY:



It was in the October issue, last Fall, that Brick & Clay Record first proposed a program to greatly increase the size of our industry.

Since that time, we've collected many letters and comments from our readers, with virtually all backing up the idea of such a program. To show our readers how many important men of the industry feel, we've decided to publish the following condensed comments from the letters sent us.

These letters represent all sections of the country; many of the largest and/or best-known clay products plants. In order to get the frankest possible comments, we've promised the writers that their names would be withheld.

Our Industry Potential Is Virtually Unlimited

"The greatest mistake we have made is being pessimistic. The possibilities of tripling our business in the next 10 years is not too much to shoot for." This statement taken from one of many letters received by the editors reflects the feeling of many of the writers concerning the Ten Year Program for the industries' expansion. Not only did the writers comment, both favorably and unfavorably, but they also suggested definite ways by which the industry should proceed to attain some measure of growth.

A prominent Iowa producer commented: "To me, one of the biggest stumbling blocks in the path of expanding our market and in turn the size of our industry, is the lack of an adequate of small masonry contractors the country over who are capable of bidding residential and small commercial jobs on a lump sum basis and who are willing to become a part of our promotion family. We must make great strides in this field if substantial gains are to be realized in the future."

50% Increase Attainable

"Assuming an all out effort is made in all of the fields mentioned, and provided our economy continues to move forward, my sincere feeling is a fifty percent increase in the size of our industry in the next ten years would be an attainable goal, and one worthwhile striving for."

Understandably the total increase of production of the clay products industry over the next ten years will not be uniform geographically but will tend to be greater in areas that are expanding and growing at the greatest rate and will lag in the less vigorous parts of the United States.

Letters from our readers show this regional difference to a marked degree and we observe that those regions who have enjoyed the most growth in the last ten years and who have formed the strongest organizations to promote their products are the most optimistic about the future.

One writer, an outstanding brick maker in the Southeast, indicated the optimism which he feels in the industry and justified himself as follows: "Some regions have more than doubled in the 50's in spite of setbacks in the economy. This was accomplished in these regions by concerted effort of the manufacturers and not necessarily by the improvement of economic conditions.

"In the 60's we believe we will have a greater economic growth. We have the start of a closer cooperative effort on a national scale through our Research and Promotional organizations. They should be full grown in the 60's.

"Our progress in mechanization of plants did not reach its peak in the 50's and should certainly improve. Approximately 7 years of the 50's saw a sellers' market, therefore not enough emphasis was placed upon promotion and selling."

This writer closes his remarks with the statement that: "The battle is on, but not won, and we have more to convince the buying public than any of our competitors have with substitute materials."

Recurrent through the comments of the different writers was the idea of promotion, research, and the maintenance of strong organizations to overcome the handicaps of relative smallness of the average brick producer.

Need Cooperative Effort

This dependence on cooperative effort for industry promotion among the consuming public is of course a real thing and most of those who expressed their views on the future growth of the brick industry stressed the effects of cooperation on growth potential.

The high morale generally reflected in the letters received by the editors is perhaps exemplified by an Eastern manufacturer who stated: "I have read with interest your ten-year program for the clay products industry. At first it does appear to be overly ambitious, for, as you also point out, ten years is a short time in the life of any industry. But on second thought, is it too ambitious?"

"I personally believe that the structural clay products industry is right now on the threshold of the greatest potential for real growth and advancement since sun-dried bricks were first made in ancient Babylon. Whether or not we take full advantage of this potential depends to a great extent on how well the industry as a whole works together for the next decade.

"Once the entire industry realizes that our real competition is from without and not from within, once the entire industry becomes convinced that cooperative effort is the only answer, and once every manufacturer becomes an active participating member of the two organizations which form the broad base on which we are building, then we will see such tremendous strides of progress in our industry as to make possible your "14 billion more in half a score!"

'58 Sales To Emphasize SCR, RBM

SCPI sales caravan points out markets for this year; lays new stress on selling brick for many non-construction uses; merchandising for NAHB

Heavy promotion this year will be directed toward such products as SCR brick, RBM and, of course, face brick; new emphasis will be put on getting brick into multi-family housing and for such "extras" as patios, barbeques, swimming pools, etc.

These items capsulize the two shows, "The Hard Sell" and "Merchandising Magic With Brick" that appeared before Region 5 members and NAHB members in Chicago in early March.

The annual SCPI sales caravan began in the morning with "The Hard Sell," aimed at the Region 5 members. E. F. "Al" Walsh, SCPI promotion director, pointed out the need for knowledge of where the markets lie in 1958, the need for accurate market statistics to provide a "road-map."

Stress Housing

Walsh reported that the '58 building market will be up 3% to $32 billion, with 58% of this market being in housing. Single family housing is estimated to be up 3% to $12 billion. Walsh laid emphasis on the prediction that multifamily housing will go up 14%, to $6 billion, a sales market that is growing fast.

Turning to non-residential building, Walsh reported predictions of: industrial, down 8% to $3 billion; commercial, down 3% to $3.4 billion; education, up 3% to $3.8 billion; hospitals, up 13% to $1.1 billion; other, up 3% to $2.2 billion. Walsh then asked if brick were to get the increased construction or if it would go to the competition.

While the non-residential market has stayed about the same, use of brick and tile went down, Walsh said, by something like 25%.

One tool to correct such a situation as above, the meeting pointed out, was to have salesmen who have greater product knowledge and technical knowledge, not only of their own product but of the competition's products.

As one means to this end, one of the day's skits showed how the SCPI Sales Engineer training courses, either in person or by correspondence, could help salesmen land more orders.

Pre-Selling Important

The necessity of pre-selling customers is becoming more important, Walsh noted, which is one reason SCPI is so active in such things as a Curtain Wall Seminar, that is sponsored by the Producers' Council. During these seminars, brick people have the opportunity to meet claims of glass, metal and aluminum people and the opportunity to get across sales points for brick and tile.

Other work in this area of pre-selling includes the advertising programs, participation in Modern Masonry Seminars at architectural schools, and many meetings.

Ten Sales Points

Ten of the points being made at these efforts include these: brick has low initial cost; low maintenance; better suitability for heating-air conditioning purposes; lower insurance rates; color and texture; design flexibility; better sound insulation value; weather resistance; dimensional stability.

Again at this meeting, Walsh urged more local tie-ins with the national ads, repeating that national ads can't do the selling job on their own.

The meeting then turned attention to RBM, a development by the clay products industry back in 1813. Unfortunately, as Walsh pointed out, the industry hasn't promoted RBM as it should, with the result that reinforced concrete has stolen much of the market.

With the test results from last year's Nevada A-bomb experiment, Walsh feels that the industry is being handed back a great opportunity to make RBM go. Interest in RBM construction, both by private and government people, is greater now than probably ever before, Walsh said. Since the test results became known, Walsh has heard of twelve government projects that have been switched from concrete to RBM.

Walsh said that the market for RBM goes well beyond just "disaster" construction. He suggested and illustrated such uses as piers for carrying pipe and bridges; uses for

(Continued on page 100)

Double Capacity Built In At Southern

New plant addition has 325' Harrop kiln, extensive instrumentation for greater control of drying, firing, even of individual burners.

Double drying and firing capacity was built into the plant of the Southern Brick Co. at Ninety Six, S. C., as a result of expansion and modernization of an old periodic brick plant. The company felt that kiln modernization was required to maintain a competitive position of a plant built in 1918. However, the plant had been well maintained since it had come under control of the present owners in 1935 and the periodic kiln and tunnel dryers were in excellent condition.

In view of the good condition of the 10 kilns it was decided to retain them as standby capacity to be used only in periods of high demand. Consequently land adjacent to the older installation was cleared and construction to house a 325 foot tunnel kiln was started in July of 1956. Provision was made for the placing of the machine room in a most advantageous position in relation to the new kiln.

Some Pit Blending

Blending of clay won from three pits is done at Southern by partial loading of the trailer trucks used to haul clay to the plant. In the present procedure one pit is fairly close to the plant but the other one is located some ten miles from the plant. As conditions of the roads that must be used will not allow a fully loaded trailer to make the trip to the nearby pit the route of the trucks is determined by the roads.

A partial load is hauled in each trailer from the closer pit to the other pit. Here the balance of the load is added to the truck and the proportions of the load are those found to give the best mixture in the making of brick. The conditions of the haulage road from those pits allow the Mack tractors with the clay trailers to haul full loads from the place where the trailer is finally filled to capacity.

Southern Brick is associated with another company in the mining of raw clay from the two pits. By using the machinery that is required to operate the two pits to a greater extent of their capacity, costs of mining clay is reduced for both plants. As the pit equipment includes a ¾ shovel, two five yard scrapers, two large crawler tractors and three dump trailer combinations for transportation this sharing of cost results in a sizable saving of capital and operating costs.

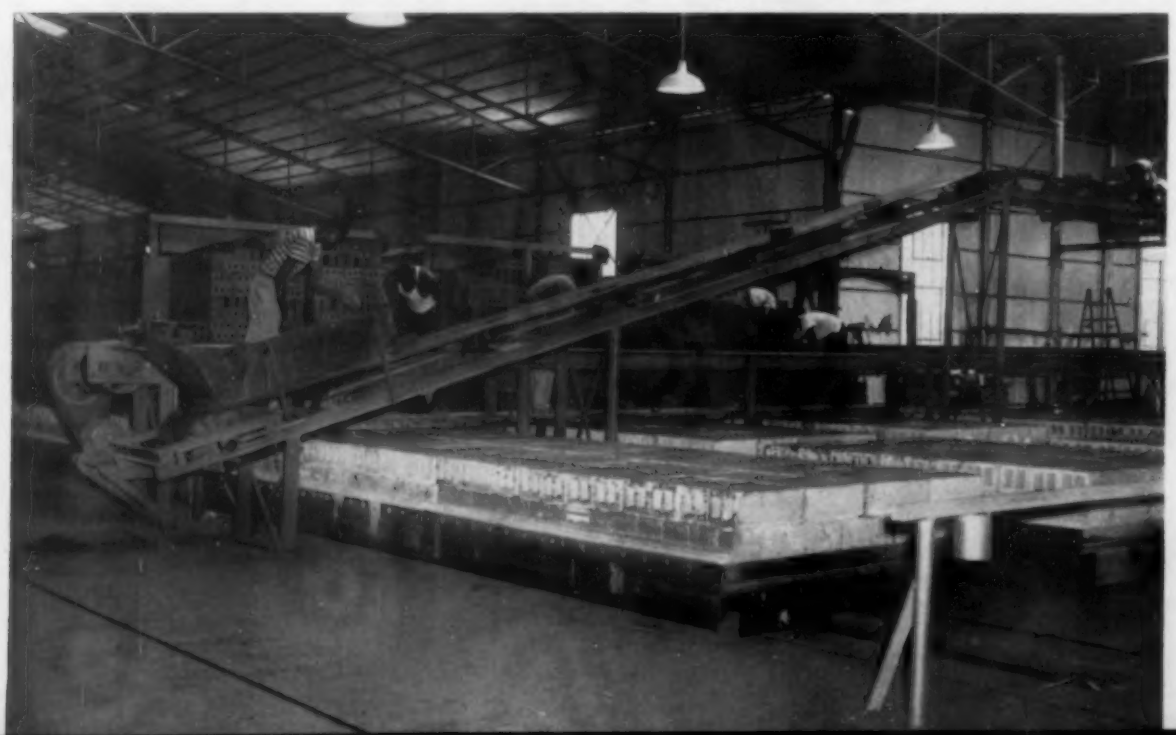
Use Scalping Screen

When brought to the plant the load of clay secured from the three pits is dumped directly into the feeder bin. This bin is located so that, using a vibrating feeder, the clay is fed from the bin to a conveyor which passes the load over a 4 x 5 foot scalping screen before the tailings are routed to a hammer mill. This unit is a Miller Double Rotor powered with two 50-HP motors. The discharge from the hammer mill is passed to a 4 x 8 Meco screen for final grading and then conveyed to the ground clay storage shed.

Had Good Machinery

When required for production, clay is removed from the bottom of the clay storage with a conveyor running under the storage bin and fed through a surge bin and a Steele even clay feeder to the mill room.

At the time plans were made for the modernization of the plant the machine room in the old plant consisted of



machinery relatively new and in good condition. Therefore after the new plant was completed the machinery was removed from the old machine room and installed in the new machine room which was located in the most efficient location in relation to the new firing facilities.

To maintain the maximum amount of flexibility, transfer tracks were installed so that production from the mill room can be set on the tunnel cars of the new tunnel or set on the dryer cars of the periodic plant and then moved to the periodic dryer and kilns. When set on the dryer cars the cars are moved some 250 yards on an electric powered Meco transfer car that has room to carry three dryer cars at one time.

As the real difference in the new layout, as far as the old plant is concerned, is only a longer distance to the dryers therefore the effectiveness of the periodic plant has not been changed to a significant degree.

72,000 Per Day

Using a Steele 40E combined pug and vacuum extruder the mill room is producing 72,000 brick a day which is the capacity of the tunnel kiln. The water is added with the high pressure water system designed to promote better mixture of clay and water while maintaining a uniform rate of flow to the pug mill.

This, combined with the type of clay feeder in use, allows the tempering of the clay to be very uniform which in turn allows a stiffer column. A Beach Russ vacuum pump is used to supply a vacuum of 27-28 inches. After being cut on a No. 18 cutter the brick are set either on the dryer cars or on the tunnel kiln cars for the new plant.

Southern Brick manufactures standard brick, roman and norman brick and the unit proving so popular in the southeastern part of the country, the 8 x $2\frac{2}{3}$ x 12 building block. Reels for the different sizes are moved back and forth with a hoist moving on a beam installed over the cutter position and reel storage area.

In normal operation all of the brick are dried and fired in the new tunnel kiln and in this case 3,600 standard 8 inch brick are put on each of the 6′ x 9′-2″ tunnel cars. Using three tracks at the offbearing station, the cars are pushed beneath the belt with hydraulic car pushers.

The tunnel dryer is separate from the kiln and set to one side of the kiln. It is two tracks wide and will hold 13 cars in each tunnel. Heat is supplied from the cooling end of the tunnel with the entering air about 400 degrees and the leaving air is 120 degrees when in normal operation. The dryer is controlled both in temperature and humidity.

The automatic controller insures an ideal drying curve in the dryer at all times. After a drying period of 30 hours the dry brick are removed from the dryer and moved with an electric transfer car to the entrance end of the Harrop kiln.

The tunnel kiln is 325 feet long and uses cars set eight brick wide and 16 brick high. When constructed the kiln was equipped with dual fuel North American burners although the plant is tied to a gas supply. The oil standby is No. 2 fuel oil. Eighteen burners are used in the preheat section of the kiln and 42 are used in the furnace section.

Unusual Supt. Office

One of the features of the plant is the unusual location of the superintendent's office. To secure a place where the superintendent would be centrally located without in-

Continued on page 98

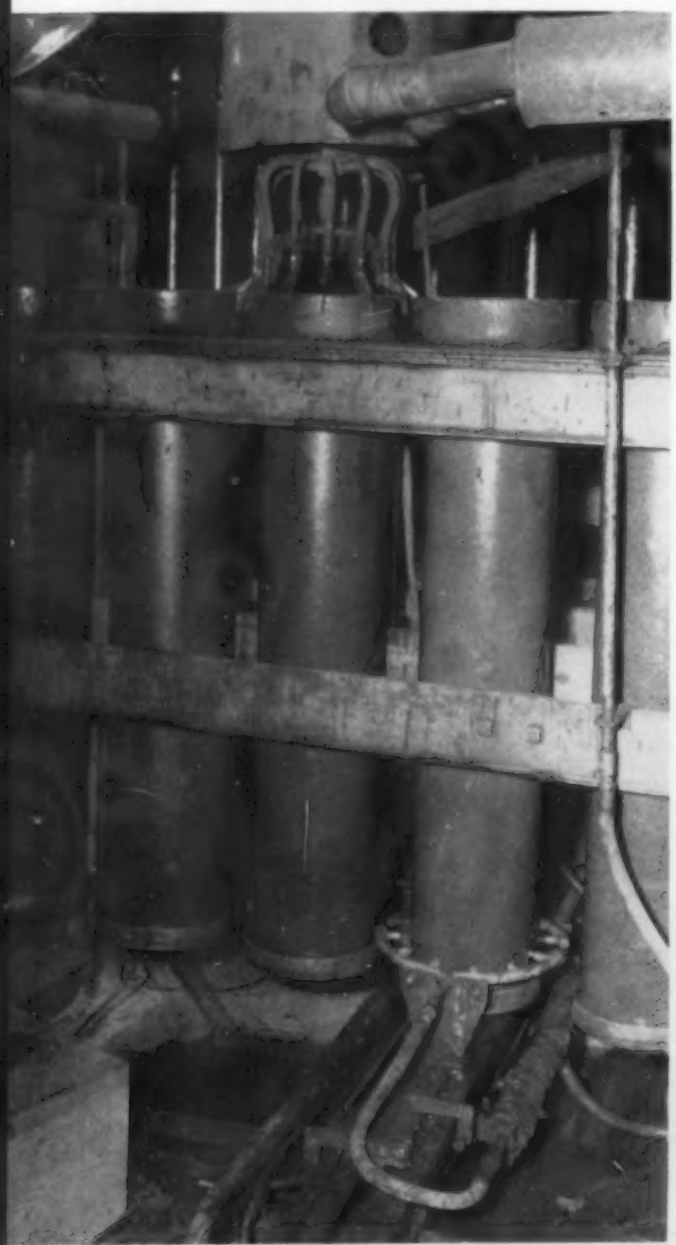
Superintendents office, in unusual location, can overlook all operation in kiln area.

Brick are set on trucks in cubes by lift trucks; brick are loaded, graded in the one operation.

Automation Emphasized at Dickey

New Pittsburg plant uses automatic pallet feeder, pipe hoists, fork trucks to reduce manpower needs.

Joint material is automatically poured in this set-up at the new Dickey plant in Pittsburg, Kans.



Design for the production of eight inch pipe in the best and most economical manner possible was the goal on the W. S. Dickey Clay Mfg. Co. addition at the Pittsburg, Kansas plant.

Taking ground clay from the established grinding department the new division forms, dries and fires its production as a single integrated production unit with complete operating independence from the balance of the plant.

Pioneers in the automation of pipe handling both in the green and fired state the Dickey research and design division have used every available device to decrease costs.

Horizontal Extrusion

Using a F.R.H. extruder, eight inch pipe are formed horizontally and removed from the extruder with a Pearne & Lacy take out machine. The extruder is operated with an air powered clutch to start and stop extrusion in the proper sequence of the operation. Formed pipe are placed on the trimming machine mechanically and both ends of the pipe are finished to exact size.

The pipe ready for the dryer is passed, again mechanically to the palletizing machine. This machine was developed in the company's laboratory and feeds pallets into the line automatically as they are needed.

The pallet loader is filled with a fork truck and masonite rings are placed in proper stacks from which they will be moved to their proper position.

The pallets are constructed of steel, grating style, for good air circulation and measure 42″ x 72″. The bottom pallet is moved forward until the first pipe position comes under the Masonite ring placer. At this point three rings are picked up from the stacks with suction and placed on the pallet. Rings are used to prevent damage to the soft wet pipe when they are set on the grating.

Pipe Stacker

Position of pallet with rings laid down for each rank of pipe is advanced until the first rank of rings are under the pipe stacker. Here the stacking machine places one pipe on the first ring, indexes and repeats the operation until the third pipe of the rank is placed.

Then the pallet is moved forward one pipe space and the stacker repeats the entire sequence of operations. All control is automatic and the only physical labor required is the loading of empty pallet with the fork truck and the Masonite rings by hand.

Fork Moves to Dryers

When 15 pieces of pipe have been placed on the pallet the group can be removed from the conveyor line with fork trucks and moved to conventional pipe dryers. These units are four in number and each represents half a day's production in order that the drying process can start soon after pipe are made. The conventional dryers used at Pittsburg are vertical air flow with air heated with gas fired furnaces. The floors are steel grating to carry the fully loaded fork lift trucks. Eight inch pipe are dried

in 36 hours in these units which recirculate portions of the air to control temperature and humidity.

Experimental Tunnel Dryer

Pioneering in another first, a portion of the production of the new line is dried in what was frankly described as an experimental tunnel dryer.

When this dryer is in use, pallets of pipe are not removed from the palletizer line but continue on rollers until they reach the tunnel dryer. This unit is wide enough to accept two rows of the pallets on the six foot side.

Pallets are moved into the 300 foot long dryer with hydraulic rams but, once inside, a hydraulic powered walking beam moves the steel pallets through the dryer. Designed to operate either as a continuous or a periodic dryer, more success has been had operating periodically. Gas fired furnaces on top of the dryer are controlled in conjunction with fans to maintain the desired temperatures and humidity. When dry, the pipe are moved from the tunnels with the walking beam and taken to the kiln car loading area with fork lift trucks.

Regardless of where the pipe were dried, steps following the drying are the same. Fork trucks place pallets of pipe on a dock which is the same height as the kiln cars and next to the loading truck. Car loaders place green clay rings on the floor of the tunnel cars to prevent damage to the pipe ends from shrinkage during firing and then move pipe from drying pallets to the tunnel kiln car.

In this effort they are aided with air powered hoists fitted with forks to fit the hub of the pipe and hung from freely moving beams much like a traveling crane. As the air hoists operate very rapidly pipe setting is speeded up many times while greatly reducing human effort.

Use Ring Dryer

Kiln cars are ten feet long and ten feet wide and are set with 81 pieces of 8″ pipe. Cars are moved through a ring dryer to dry the rings on which the pipe were set. This unit is two tracks wide and will hold 12 cars at one time. When moved from the ring dryer the cars are placed in the tunnel kiln for firing.

Dickey's Allied Engineering kiln is 450 feet long, ten feet wide on the inside and designed to take four foot lengths of pipe. Fired with gas, the tunnel has been equipped with salt water glazing system. In this method of glazing, water saturated with salt is injected into the furnace section of the kiln at periodic intervals. A good even salt glaze is being secured with this system.

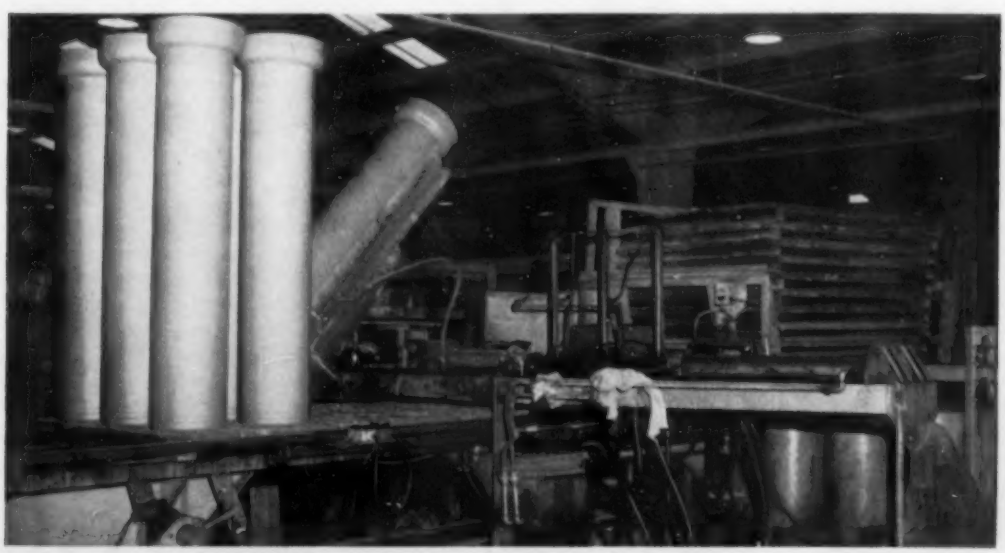
Heat Circulation Good

Heat input to the kiln is controlled in two zones with Leeds & Northrup controllers. Provision has been made in the kiln for recirculation and quick cooling. Cars were designed so that the flame passes beneath the setting of the ware preventing damage which might be caused by flame impingment. With this arrangement the circulation of heat is good on what might be considered a wide car.

Large Kiln Building

Cars are moved from the exit end of the kiln and taken to the holding area for disposition. The kiln building is 560′ x 80′ and was made specially large so that pipe could be unloaded from the kiln cars under cover at all times. The building is steel frame construction covered with Galbestos siding and plastic sky lights for maximum illumination.

Production at the plant is under the supervision of P. B. Friley who is assisted by Bob Troughton. Planning and much of the design was done by the research division under the directorship of E. R. Ligon. Members of this group are Wendell Johnson, mechanical engineer; Frank DeGaperi, architectural engineer; and Roland Holmes, assistant director and geologist.



Company engineering has developed a special pallet feeder, eliminating much of the manual handling needed.

How Stahlton Units Are Made

The author discusses the plant setup necessary; pre-stressing and tensioning processes; equipment and preparation necessary for needed concrete.

by
Arthur P. Klages

Part 4 of Series

Manufacturing centres around 4 prestressing beds, each 75 metres long, approx. 4'6" wide. Each bed has at each end a set of anchor blocks in which the p.s. wires can be securely anchored two at a time by special wedges.

The beds are located parallel to each other and about 5'0" apart (for clearance and working space for material handlings), are of reinforced concrete, and generally of a tee section. The space underneath each bed may be used for service piping such as steam supply (if that is used for heating). Because there is no heavy lifting involved, no overhead crane is required. So the space above the beds is used for power and air supply lines and for racks to hold deck boards (referred to below) and tolls etc.

The necessity for and type of building housing these basic manufacturing facilities depends on and is determined by the local conditions, climatic and otherwise. The building is not required for support of any equipment and is therefore not an integral part of the production facilities.

Wire Storage

At one end of the bed is the wire storage area. Reels of wire are taken from storage and mounted on a trolley or traverser car, on which they can be moved to each of the positions in line with any of the beds, so that in each position the wire can be conveniently fed off the reel or reels, pulled through the anchor block and guide plate at the bed end, and pulled over the full length of the bed to the tensioning end.

Tensioning Machine

At the other end of the beds is the *tensioning machine*. This is supported on an overhead monorail spanning behind and across the 4 bed ends and this way it can be easily moved into line with any of the beds. The support and frame of this machine is so designed that when pulling the wires tight, the reaction (thrust) is simply held against the concrete bed end. The nonorail supports only the weight of the equipment.

The tensioning machine is mechanical, not hydraulic. It consists of a small electric hoist supported in the upper end of a steel framework, which

itself is suspended on the monorail. Through a total of 6 falls of rope, this hoist lifts through a "dynamometer" (really a sensitive spring scale) the center pin of a chain sprocket.

Over this sprocket passes a short length of roller chain, each end of which is provided with a special wire gripper to grip either one or two wires as may be required. Each chain lead from this sprocket also passes over an idling sprocket fixed to the machine frame, so that the direction of pull can be turned from the vertical to the horizontal.

As will be obvious, the sprocket referred to firstly is a compensator, to assure that when two (or four, as the case may be) wires are tightened simultaneously, each wire has an equal load.

When double grippers are used, these also have a compensating bar or beam to assure equal tensioning of the wires. With these grippers, it is possible to tighten 4 wires simultaneously. More elaborate hydraulic equipment capable of pulling tight a greater number of wires simultaneously has been previously used but now is abandoned in favor of this equipment, designed to suit the overall production sequence of operations and techniques.

Load Measured

It has been found that the tensile load applied to the wires can be measured with considerable accuracy with the mechanical "dynamometer" now used. Alternatively a cylinder containing hydraulic fluid can be interposed between the lower sheave block and the sprocket pin, and the fluid pressure induced by the hoist action can be measured by suitable hydraulic gauge.

No automatic cut-out switches to prevent "overload" are used. Firstly they are not necessary. Secondly it is common practice to purposely overload the wires by about 25% (or as otherwise calculated to be the known final load conditions on the wire) by pulling them tight to that amount as a test load, then partially releasing them again before anchoring. This practice provides a test on the wire and is equivalent to the greatest load ever likely to be applied to it.

The hoist is controlled by a simple electric push-button switch, by the operator who is responsible for wire placing, tightening and anchoring.

Periodic checks on wire tensioning are made by comparing actual wire elongation with the dial readings on the gauge used to register the load.

Anchor Blocks

The *anchor blocks* at the bed ends are not fixtures. These blocks are movable in the sense that they can be readily moved from one bed to another, or to different alignment positions behind the anchor posts in any bed, as may be required for various types of prestressing work being done on the beds. The beds are therefore NOT confined to Stahlton manufacture. They are perfectly suitable for production of precast prestressed members, subject only to the handling equipment available.

These movable anchor blocks are of cast steel, approximately 4″ square and 2′ long. Each has 15 tapered holes through it, specially bushed to accommodate the tapered wedges and two wires each, so in total being capable of holding 30 wires. Each wedge can be used for holding either one or two wires.

The block at the anchor end of the bed (used as meaning opposite to the tensioning end) are fitted with screw jacks, which are used for releasing the tension in the wires after the concrete in the plank grooves has set sufficiently, and prior to cutting the wires. (The wires are never cut while taut.) Hydraulic releasing equipment has been used, but found less economic in application than this simple equipment.

Any Concrete Mixer

Any efficient concrete mixer is suitable for the Stahlton plant requirements. A ¾ cu. yd. mixer is generally of sufficient capacity, as the amount of concrete placed is relatively small, and as no large quantity is required at any one moment.

It does however pay to have all equipment associated with concrete preparation well mechanized, especially in respect to the weigh-batching, so that accurate and reliable quality control is assured. It is common practice in Europe to buy and store cement in bulk (using pneumatic handling) and to provide suitable bins for sand and aggregate storage so as to cut handling in the plant to a minimum.

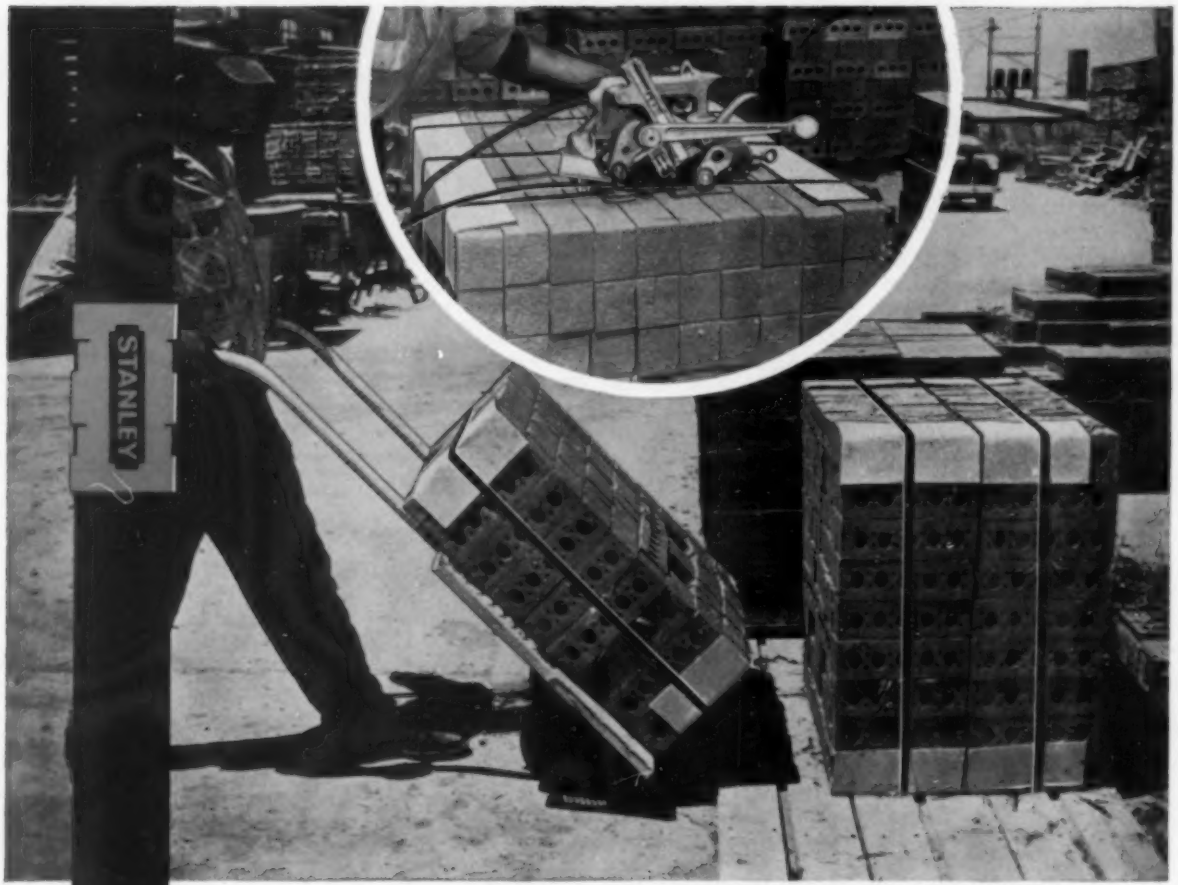
Handling equipment varies and will be described as we follow through a typical manufacturing sequence.

The *plant layout* in the various Stahlton plants vary only in that they are re-arrangements of the same basic facilities, as necessitated by the local conditions, such as existing building layout, boundaries, access, etc.

The layouts all provide for a building to house 4 beds plus the manufacturing equipment, a store for wire working, toolroom, etc., yard space to accommodate the incoming supplies of plank tiles, and yard space to accommodate stocks of finished planks.

Neither plank tile nor finished plank needs covered storage. The yard ground surface quality and finish depends on the type of handling equipment to be used, so it must be reasonably smooth and well drained if a fork truck is to be used. Alternatively, one of many forms of overhead crane can be very effectively used.

Above is a view of anchor blocks and tensioning units used.



Another **STANLEY STEEL STRAPPLICATION*** on the job

Here's a brick package that "shrinks" for easier handling on the job!

A manufacturer in Georgia wanted to simplify and accelerate the movement of brick by mechanical handling from kiln to customer, yet assure equally efficient movement at the job site where manual handling was necessary. The Stanley "Uni-Pac" pictured above proved the answer. 3 bands of steel strapping applied over corrugated board make a 250-brick unit for storing, loading and unloading a maximum number of bricks in minimum time.
At the job site, the "Uni-Pac" is disassembled – just by cutting the corrugated board – and becomes 3 smaller individually strapped units for handy, quick, one-man handling.

Stanley "Uni-Pacs" can be of any size . . . job-tailored to your needs by The Stanley Steel Strapping Specialist. And he can provide the hand or power tools for applying the strapping as efficiently as possible. Most tools are obtainable on a free-trial basis.

WRITE FOR YOUR FREE COPY of the "Stanley Strapplication Manual of Packaging and Shipping" to **STANLEY STEEL STRAPPING**, Division of The Stanley Works, Dept. D, 1146 Lake Street, New Britain, Connecticut.

**The system-atic way to solve specific packaging and shipping problems*

INSURE IT–SECURE IT WITH STANLEY STEEL STRAPPING

AMERICA BUILDS BETTER AND LIVES BETTER WITH STANLEY

STANLEY

This famous trademark distinguishes over 20,000 quality products of The Stanley Works—hand and electric tools • drapery, industrial and builders hardware • door controls • aluminum windows • metal parts • coatings • steel and steel strapping—made in 24 Stanley plants in the United States, Canada, England and Germany

ACS To Meet in Pittsburgh April 27

The Penn-Sheraton Hotel; April 27-May 1; Pittsburgh Pennsylvania.

Those are the key statistics for the ACS members planning to attend the annual ACS meeting, the 60th, in the city where the ACS was founded.

Among the some 140 papers to be read during the meeting will be 39 in the Refractories division; 22 in structural clay products; and 13 in the Materials and Equipment division.

In addition to the technical aspects, many special events have been planned including a "Pittsylvania Party" planned for April 28 at the Syria Mosque. This even will include a dinner, variety show, and dance. A separate, special program during the meeting has been planned for women who'll attend the convention.

Below are some of the many suppliers representatives you'll want to meet at the ACS meeting

R. F. Poole
Chisholm, Boyd & White Co.

S. A. Stone
Deister Concentrator Co.

Fred T. Buzard
Fate-Root-Heath

William Buzard
Fate-Root-Heath

Ark G. Gilbert
Fate-Root-Heath

J. D. Clark
Foote Mineral Co.

R. Langenecker
Foote-Mineral Co.

F. O. Barber
Harrop Ceramic Service Co.

G. D. Brush
Harrop Ceramic Service Co.

R. A. Schoenlaub
Harrop Ceramic Service Co.

W. H. Schotts
Harrop Ceramic Service Co.

H. L. Barker
O. Hommel Co.

W. E. Dougherty
O. Hommel Co.

N. Heston, Jr.
O. Hommel Co.

E. M. Hommel
O. Hommel Co.

H. L. Latimer
O. Hommel Co.

B. Miller
Miller Equip. Co.

Mrs. B. Miller
Miller Equip. Co.

D. Frame, Jr.
Miller Equip. Co.

N. Mahler
Miller Equip. Co.

G. C. Betz
Metal & Thermit Corp.

R. R. Danielson
Metal & Thermit Corp.

J. A. Peterson
Metal & Thermit Corp.

Thomas Stadden
Metal & Thermit Corp.

J. V. Stout
Metal & Thermit Corp.

G. Van Gordon
Metal & Thermit Corp.

W. T. Fabianic
H. K. Porter Co.

J. L. Henderson
Robinson Ventilating Co.

W. W. Henderson
Robinson Ventilating Co.

Neal Robinson
Robinson Ventilating Co.

E. Franey
Toronto Fdry. & Machine Co.

W. Charbonnier
Walsh Refractories Corp.

C. E. Evans
Titanium Alloy Mfg. Div.

K. B. Strong
Titanium Alloy Mfg. Div.

D. D. Wheeler
Titanium Alloy Mfg. Div.

J. J. Duggan
Walsh Refractories Corp.

C. T. Foster
Walsh Refractories Corp.

L. B. Henderson
Walsh Refractories Corp.

R. A. Ruiz
Walsh Refractories Corp.

F. C. Steimke
Walsh Refractories Corp.

MINUTE MONEY MAKERS

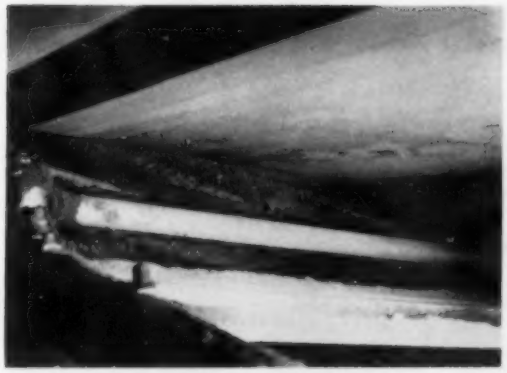
A special expanded section of production tips to help you save labor, cut costs, improve production methods and improve your plant efficiency.

Prevent Pallet Shifting

Many plants who are now shipping brick in strapped pallets might take note of an easy method of controlling shifting of the load in railroad freight cars. In this loading method the inside edge of all pallets are placed on one inch blocks while the outside is left on the floor of the car. An empty isle can be left in the center of the car and gravity will keep the pallets on the outside of the car. Plants using this loading system have reported good results and a significant reduction in broken packages.

Better Lighting

Free light is now easily secured in all corrugated buildings in the daylight hours with plastic skylights. Practically all new buildings are being equipped with this type of light. Old buildings can be easily altered by removing a section of the existing siding or roof and replacing it with the plastic section. Not only is the light secured by this method low cost but it is diffused and practically glare free. All operations in the plant will benefit from higher light levels resulting from this easy system.



Conveyor Belt Cleaner

Conveyor belts can be kept free of carry-over material with rotating brushes like those manufactured by the Osborn Co. Several different details have been developed by this company to drive the brushes and to maintain a constant and predetermined pressure on the belt.

The brushes can be driven with separate electric drive or power can be taken from the belt. In use the brushes are self cleaning and, due to their helical design, are thorough in the removal of sticky material from the face of the belt. Several different bristle materials are available in order that different conditions of use can be accepted.

Moves Loaded Cars

Light garden cultivators can be used to move both loaded and empty kiln cars throughout the plant. This particular model, a Gravely, has been geared down by the manufacturer so that its top speed is only two miles per hour. The pulling power has been increased, however, to such an extent that the five horsepower motor can move many tons of brick on tunnel cars.

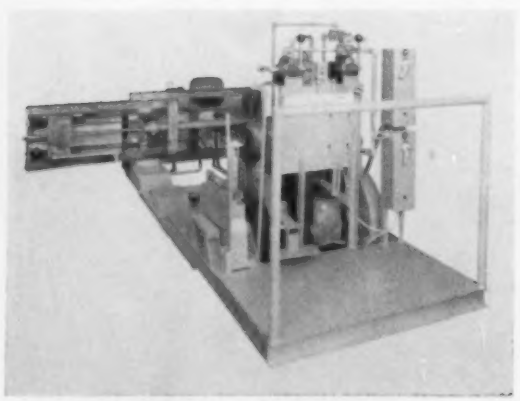
The unit can be coupled to cars so that they can be pulled as well as pushed. This unit releases heavier equipment for more productive uses thus reducing costs and eliminating hand pushing.

MINUTE MONEY MAKERS

Double-Duty Hauler

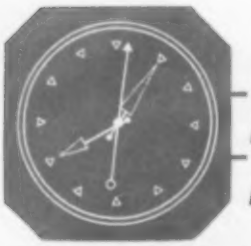
One plant is doing two jobs with one piece of equipment. After buying a Prime-Mover with a dump bed for hauling small quantities of scrap, it was found that the torque converter drive made this unit ideal for use as a tow truck.

Shown here it moves five loaded wagons in close quarters between kilns. The dump bed is removable and can be replaced with other types of beds.



Kiln Car Transfer

Car pusher mounted on transfer car speeds up movement of cars off of the transfer car. Using this car, the operator can handle an increased number of cars during any given time. The transfer car pictured, a Meco, is also equipped with a winch for pulling cars onto the transfer car. This unit has electric brakes and the car pusher can be located under the car if this feature is required.



MINUTE MONEY MAKERS

Hi-Temp Fan

Pictured is a fan designed to operate with blade temperatures of up to 1600° F. Used in very hot sections of kiln for circulation of atmosphere, these fans move 3200 CFM at 1910 RPM. Increasing flow tends to improve the recovery as well as making for better fuel economy.

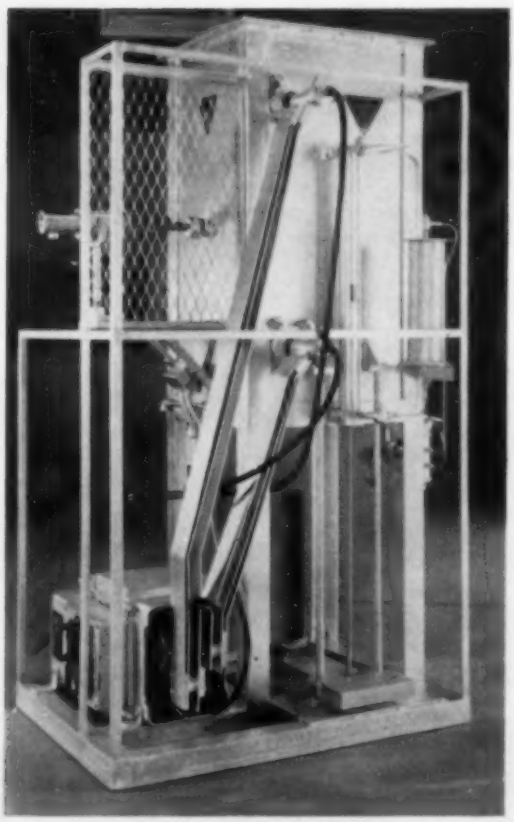
Heat slinger, well back from the blade, minimizes the effect of heat on the drive of the fan. At 1600° this 18" blade requires .21 B.H.P. at its rated speed.

Sheet Steel Sheathing

Cost of sheet steel sheathing to cover all of the exterior of periodic kilns should be investigated and compared to the cost of straps and fittings otherwise required to restrain the walls. It has been reported that the solid sheathing is little, if any more, expensive in some areas and of course is a much more satisfactory method from the standpoint of maintenance.

In the kiln pictured the construction consists of: steel sheathing, two inches of loose insulation and nine inches of insulating fire brick. The crown is made of nine inch insulating brick topped with two inches of cement and weatherproofed with asphalt. Due to the greater inside diameter, the capacity of the insulated kiln is 115 tons of tile compared to 90 tons for the standard kiln.

A reduction in the oil required to burn a ton of ware has been observed in this kiln. It requires 16.5 gallons in the insulated kiln compared to 25 gallons to burn a ton of ware in the standard kilns.



Vertical Lab Kilns

For laboratories requiring kilns with accurate temperature control and adjustable heat-up rate, Pereny Equipment is now offering a vertical unit incorporating these features. Designed for ultra-high temperatures of up to 5,000° F, the controls will maintain plus or minus 20° of a selected temperature.

For convenience of laboratory personnel, the work load is raised and lowered hydraulically and stepless temperature control is combined with rapid or slow warm up.

Press Operator Platform

Increased production through the reduction of operator fatigue is the chief benefit of an operator's platform designed from the ground up for easy remote control of pipe presses. For both hydraulic and steam operated sewer pipe presses controls have been scientifically located for control of extrusion, cut off, die locker, clutch and brake. The dimension of the seat and the location of controls have been selected to facilitate the work of the operator.

Low Cost Firebox Arches

Reduce kiln costs by constructing firebox arches with castable refractory concrete made with Lumnite calcium-aluminate cement.

Monolithic construction provides savings in both installation and maintenance. Refractory concrete

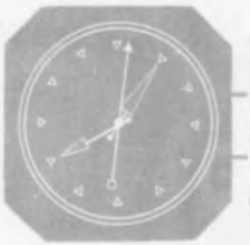
is easy to place, using plant labor. Reaches service strength in 24 hours. Monolithic construction offers greater structural stability, resists the destructive effects of repeated heating and cooling; helps trim maintenance costs.

Pallet Handling

Customer satisfaction is only one of the benefits reported by Hockers Brothers Brick & Tile Co. of Green Bay, Wisc., from the use of pallets and rugged tractors for brick handling. The unit illustrated is a standard Ford tractor that has been fitted to take a Sherman fork lift.

The unit can be towed behind brick trucks or left in busy subdivisions so that the brick handlers can remove 500 brick pallets from delivery trucks and spot the pallets around the building site where they will be conveniently located for the bricklayers. This unit can be used on rough ground where a standard fork lift would not be able to operate.

The use of these lifts in the yard and in moving brick from car unloading operation has resulted in reduction of chippage and a reduction in labor required in storing and delivering brick.



MINUTE MONEY MAKERS

Tire Supports Belt

Long flights of steep conveyor are often stripped with cross pieces to help retain clay on the belt. These raised ridges present difficulties in the support of the underside of the conveyor. One solution to this problem is illustrated in this photograph taken at Columbia Brick & Tile in South Carolina.

A bearing assembly was installed on rigid steel member, and a truck wheel and tire was placed so as to support the belt at about the middle of the long underside. The large diameter of the truck tire minimizes the shocks caused by the raised portions of the belts. The tire and bearing assembly is rugged enough to take this kind of load with no strain.

Construction Protection

Good temporary protection can be provided with plastic films now on the market and being used for many uses. The film is not expensive and is strong enough to withstand considerable rough handling. It is an improvement over old methods of temporary protection because it is lighter in weight and allows a lot of light to come through. This allows work to go on in a normal manner.

In the illustration, construction on the tunnel kiln went on during a winter where outside temperatures went to 32° below zero for a week at a time. In spite of this intense cold, the temperature inside the protected area could be maintained above 45°.

The film is tough enough to stand for the frames to be moved in case it is desired to enclose progressive areas thus further reducing costs.

Conveyor Saves 33% of Labor

Labor savings running to 33% are experienced in many plants using conveyors for the removal of fired ware from kilns. This method is particularly good for plants manufacturing products that can be loaded directly from the kiln to trucks. Here at the plant of Eastern Illinois Clay Co., 12" drain tile are being removed from 32 foot periodic kiln onto trucks for delivery.

In many plants conveyors are being used even though brick must be sorted for color and graded. In these cases the advantage of outside light reduces time required for the grading operations.

Hammermill Check

Regular checking of the scrap and tramp iron removed by magnetic separators is one way to monitor hardfacing condition. The amount of iron filings and tramp iron removed from clay will remain fairly constant as long as the wearing surfaces of the machinery used to grind the material remains the same.

If the amount of fines increase radically it is an indication that the hard surfacing of the wearing parts needs to be replaced.

To be used successfully the observation must be made at regular intervals and the amount of fine material must be noted. The removal of tramp iron is required in many plants and is desirable in all in which iron junk can cause heavy damage to machinery.

Faster Hacking

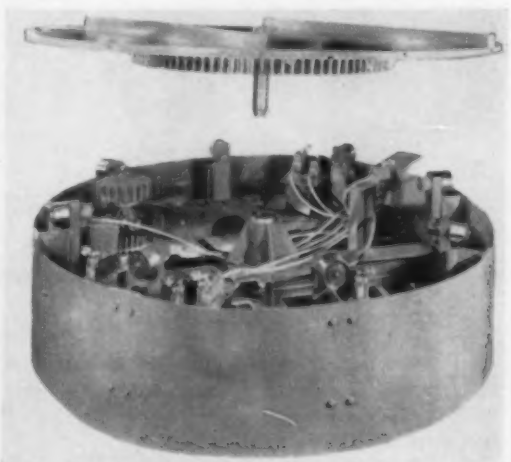
Reduced motion for off bearers cuts hacking costs as a job becomes less tiring. As the tunnel car is loaded, the platform gradually sinks, maintaining the top of the brick stack at the same level as the off bearing belt. As soon as the last brick are placed on top of the hack the car is raised rapidly to pre-

vent loss of time to the track level. Combined with under the belt motion this system reduces transportation of brick by human labor to a minimum. Platform on which the offbearers stand has been placed at a height determined to be the least tiring for this type of work.

Faster Fork Setting

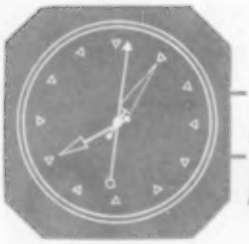
Fork setting of blocks of brick in periodic kilns will sometimes be better if the number of brick in each block is reduced. In one instance, the six brick high block has proven to be much less subject to spillage

than higher blocks. In this particular instance, spaces between brick have been reduced without causing any greater drying problems. A buff burning clay brick is dried in three days and the block is removed from the dryer car to the kiln directly. When drawn, the kilns are easier to unload as any deviation of the stacks from the vertical does not cause the lift fork driver as much trouble.



Electric Turntables

Electric driven Meco turntables reduce labor effort required to move dryer cars or tunnel cars. These tables now becoming available are operated with push button controls to rotate the load to any desired degree. The table can be equipped so that it will automatically index to any preselected position. Adaptable to pallets or racks as well as kiln cars and dryer cars, this unit could be a starting point for automatic offbearing.



MINUTE MONEY MAKERS

Proper Core Size

Ceramic core blocks that outwear several bridges are used by many plants to maintain the proper core size over longer periods of time. By maintaining the specified diameter, shipping weights are held down, less material is mined and processed and quality of drying and firing does not suffer as it does when core holes become small.

The core blocks shown have been used to produce 6-7 million brick and the wear is not yet detectable with calipers. Blocks can be secured in several sizes for outside dimensions while the internal diameter is adjustable with bushings.

Reduced Drypan Costs

Drypan grates with renewable wearing surfaces can reduce drypan costs. A frame which replaces the regular cast iron grate is covered with perforated sheet steel. The perforated carbon steel can be secured with a variety of hole sizes and spacing so that the clay can be reduced to any desired size.

The perforated sheets are cut to size and bolted to the frame and then used as standard cast iron grates. A further advantage is that the holes are the same diameter from the top to the bottom of the sheet and there is no tendency for the size of the ground material to increase as the screen becomes worn.

Flexible Transfer Operation

Automatic clutch and vee belts are combined in this interesting drive for a transfer car to provide flexibility of operation together with easy starting and stopping.

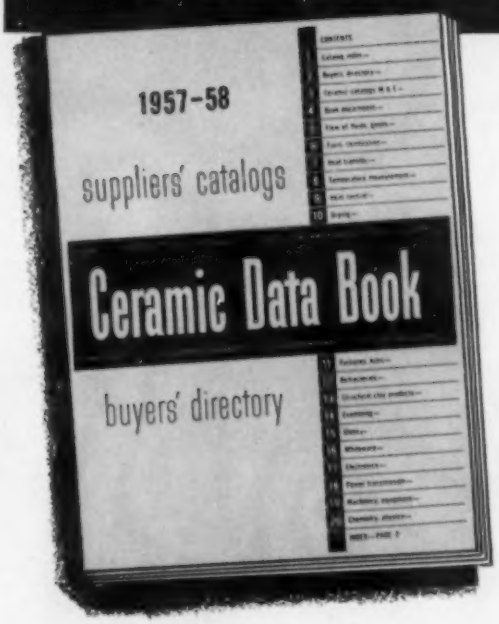
By shifting the long lever, the motor and clutch are moved so as to apply tension to either vee belt. While one belt operates the speed reducer driving the car, the other belt drives the speed reducer on the winch used to pull cars off and onto the transfer car. Direction of travel is controlled by an electrical reversing switch.

The clutch shown on the pulley end of the motor applies the driving force in a smooth and even manner reducing spillages and other damages to loaded kiln cars.

Need Equipment? Use....

THE NEW 1957-58

Ceramic Data Book



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Ceramic Data Book

5 South Wabash Avenue **Chicago 3, Illinois**

EIGHT BOYD PRESSES serve new Harbison-Walker Basic Plant

Another modern refractory plant goes to work with Boyd Presses

Boyd Press was *in the blueprints* for Harbison-Walker's new "basic" plant recently completed at Hammond, Indiana. Here, surrounded by the most modern and efficient refractories processing techniques and equipment available, eight Boyd Presses now handle the power press requirements . . . as they do in many Harbison-Walker plants from Bessemer, Alabama to Windham, Ohio and from Leslie, Maryland to Warm Springs, California.

Ninety-five percent of the power press refractories produced in the U.S. are handled on the Boyd Press. They serve *every* leading refractory producer and for good reason: The production of more and better refractories is as much the goal of Chisholm, Boyd & White Company as it is the producer's. It's why the design and performance of Boyd Press has been kept up to date with industry needs. And it is why, *whenever* you put Boyd Press in your blueprints for expansion—your next press will be the *Best Boyd Yet.*

Top: Model X Boyd Press equipped with *Boydamatic* controls is used on large 9" chrome-magnesite brick. **Bottom:** Section of press department at new Harbison-Walker Hammond operation shows two Model X and a new Model Y Boyd Press used for pressing various sizes of basic brick.

WRITE FOR BULLETIN

A new bulletin on the Boyd Press provides specifications, dimension data and shows the Boyd Press at work all over the country. Write for your copy.

358

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SUBSIDIARY OF DINGS MAGNETIC SEPARATOR CO.

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BOYD
POWER
PRESS

Papers on screening, British research, shuttle kilns; panels discuss new press, production problems.

160 Attend TRI Meet, Tour Swank's

The rules for the 1959 Factory Operators Award were announced at the ninth Operators Meeting of The Refractories Institute which convened at the Roosevelt Hotel in Pittsburgh, Pa., March 6 and 7. E. A. Williams, who will be in charge of the program, urged all member companies to be sure that their employees know of the operators award and the program.

The Operators Committee is sponsoring the award for the first time and certain changes have been made from the procedures used in the past when the Mellon Institute Committee handled the awards. Now, the best three authors of papers will be given identical prizes and no attempt will be made to evaluate the prize winners.

The contest is open to all employees of the member companies of the Refractories Institute, but the officers of those companies will not be eligible to present papers. The material covered by submitted papers may present any phase of refractory manufacture, distribution, quality control or any other problem of the industry. All papers must be in the hands of the committee by the 2nd of January, 1959. The writers of the three best papers will be asked to present them to the 1959 operators meeting and will receive the awards at that time.

Tour Swank's

The meeting also heard R. W. Davidson, G. R. Rigby and C. D. Taylor present talks on "Heated Screens," "Refractory Research in Great Britain" and the "Advantages of a Shuttle Kiln." A plant tour was made through the Hiram Swank's Sons plant at Large, Pa., the afternoon of the opening day of the meeting and this tour was the subject of a panel discussion on Friday morning. Two other panels discussed Refractory Production Problems and Tunnel Kiln operation to close the meeting.

Davidson recounted problems that were encountered at the Curwensville, Pa., plant of the North American Re-

Continued on page 89

Among these are M. E. Morgan, H. F. Greene, J. B. Skirvin, Everett Morgan.

Group here includes M. E. Morgan, R. G. Simpson, G. T. Needham at meeting.

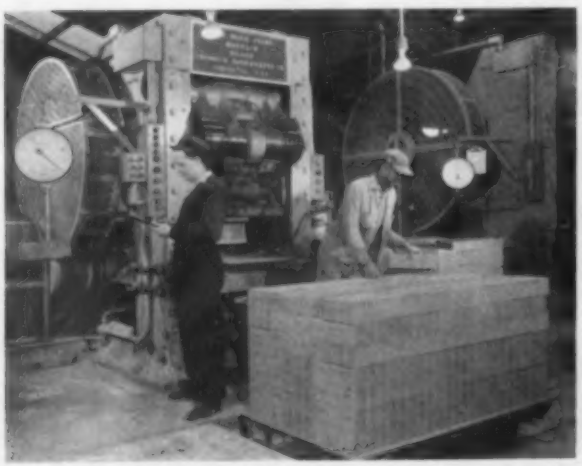
At table are W. J. Curry, Jr., W. H. Wood, C. Lindsay, D. Stefl.

Harbison-Walker Opens

New Hammond Basic Plant

Now in operation is a large, new multi-million basic refractories plant of Harbison-Walker Refractories Co., Inc. The new plant is in Hammond, Ind., within the area of heavy steel-making operation in Gary, Hammond, etc. The plant site offers easy access to Chicago, with many transportation means nearby.

Consolidated Engineering Co., of Baltimore, served as general contractor. The tunnel kiln was designed and built to Harbison-Walker specifications.

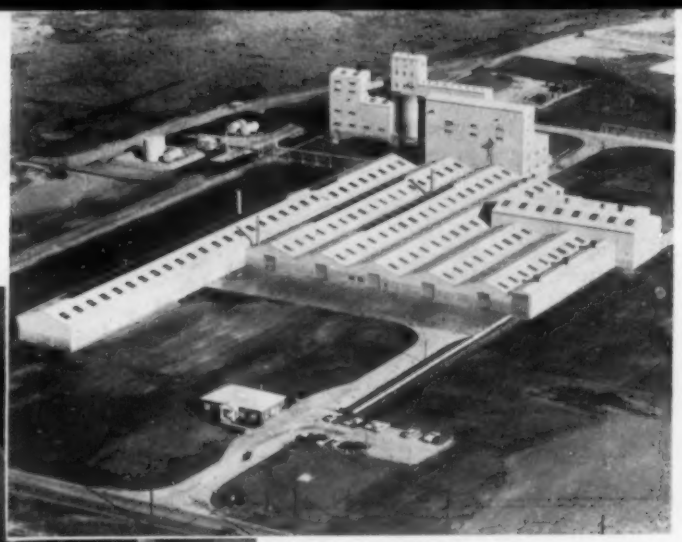


One of the new presses in operation at Hammond.

Fired brick from kiln cars being loaded onto pallets.

Here are the screening units in the dry grinding circuits. Plant makes extensive use of feeders, hoppers, etc.

The Harbison-Walker patented Metalkasing operation is shown here. Dried and cooled brick are brought up by fork truck.



Aerial view of new Hammond basic refractories plant.

At left is a view of the totally enclosed grinding circuit used; units are connected to bag-type dust collectors.

Ceramic Management Meet To be Held May 13-16

"Improving Management Performance" will be the theme of a workshop for the executive level of the ceramic industry to be held May 13-16, 1958 at the White Sulphur Springs Hotel near Bedford, Pa.

The fee for the workshop, which has been planned jointly by staff members of the Pennsylvania State University extension services and representatives of ceramics industries, will be $100.00 plus a hotel bill of $37.50.

The keynote address, "Areas for Study for Improving Management," will be given on Tuesday evening, May 13, by Dr. Earl Strong, Professor of Management at the Pennsylvania State University.

Speakers for the Wednesday, May 14, sessions will be Edward T. Serwatka, Training Supervisor, Bell Telephone Co., "Identifying Management Potential," and Carl A. Tate, General District Superintendent, Harbison-Walker Refractories Co., "Methods of Developing Potential Managers."

On Thursday, May 15, T. W. Collins, Director of Personnel Administration, Pittsburgh Plate Glass Co., will speak on "Financial Compensation for Management," and Dr. O. H. Tribble, Associate Professor of Psychology, the Pennsylvania State Univ., will have as his subject, "Non-financial Factors in Motivating Management." The dinner address that evening will be "Improving Coordination of Line and Staff Activities Through Proper Delegatoin," by E. L. Hazard, Director of Staff, Continental Can Co.

The final session on Friday, May 16, will cover "How to Conduct an Effective Conference" with Dr. Harold T. O'Brien, Professor of Speech, Penn. State, as speaker.

STEVECO

MECHANICAL REFRACTORY PRESS

Available as shown. This unit can also be furnished with spinner and spinner drive. For quotations on new equipment as above or for runner brick presses, crushers, dry and wet pans, rim discharge grinders or any replacement parts, write, wire, or phone today.

THE STEVENSON CO.

Wellsville 1, Ohio

NADD Meeting Plans Committees, Executive Secretary

Plans for setting up a full group of committees and tentative plans to hire an executive secretary were two key results of a meeting of the NADD Board of Directors, held recently in Washington.

President Durwood Boeglen stressed the need for the group to do things for members, to keep the membership interested and to make the members feel that belonging to NADD is of real benefit.

Boeglen said that NADD must get more members with the current year to see heavy solicitation of prospects for membership.

To help get these results, several committees were suggested. These include a Specifications and Resolutions Committee; Executive Committee; Promotional Committee; Bulletin Committee; Membership Committee; Finance Committee; Regional Committee.

Because the NADD address changes annually with officer election, the group began discussion of getting both a permanent Washington address and possible hiring of a full or part time executive secretary. Negotiations are underway with the leading candidate for the latter job.

Closing the meeting, it was decided that the next NADD meeting will be in Washington, June 10. Plans for the annual meeting, scheduled for Houston in November, were also discussed.

fractories Co. with attempts to screen damp material during cold weather. He stated that after the unheated screens in use at this plant were converted to electrical heat the results were not what had been hoped for until the smaller mesh screens had been changed to stainless steel.

After the stainless steel was substituted for the old screen materials, the system became more efficient and troubles with blinding were eliminated. In a discussion that followed the talk it was brought out that the effect of heat on screens is to lower the surface tension of the water contained in the clay that comes in contact with the wire of the screen. Heated screens do not appreciably affect the water content of the screened material and do not raise the temperature of the clay very much.

British Research

G. R. Rigby, who is now director of research for Canadian Refractories, Ltd. and was, prior to his present position, with the Refractory Research effort in England explained to the meeting how the British research program was organized and supported. Refractory research commenced in 1920 in Great Britain as an independent effort promoted by the government and supported by the government and supported by the combined efforts of the industry.

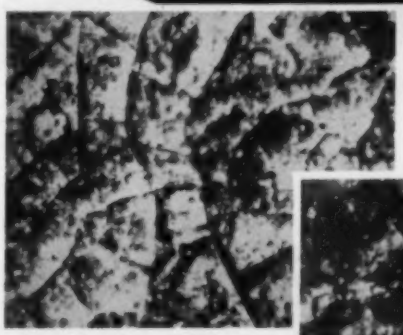
In 1948 all ceramic science research in Great Britain was combined into one research group and tasks are assigned on the recommendation of committees made up of 16-18 men drawn from the manufacturers, users and employees of the research foundation. There have been committees established on blast furnace, glass, silica, and basic refractories to control the direction of the research effort for the refractory field.

Research is communicated to the interested manufacturers and users with published reports and a biannual conference. In closing, Rigby recounted work done by the research group on silica brick to determine the actual effect of iron spots and the results of that work.

A complete discussion of shuttle kiln construction and operation was made by C. D. Taylor, president of

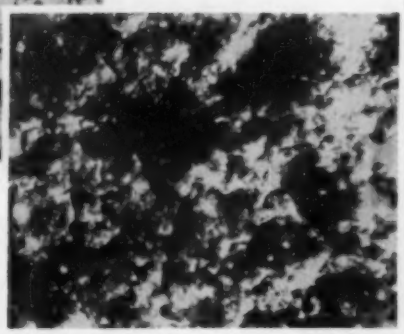
Continued on page 92

Compare these glazes



GLAZED WITH 100% SALT
BADLY CRAZED

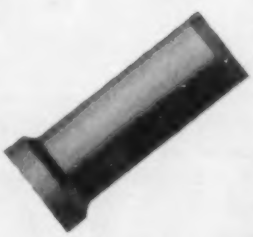
Here's proof of what a borate-salt mixture can do for your ware!



GLAZED WITH 10% BORATE–90% SALT

for a better glaze at less cost...

RASORITE® Sodium Borate Concentrates



Improve your salt glaze, lower your costs—it's easy with RASORITE! This product is cheaper than either Borax or Boric Acid, yet it gives equally fine results. Use RASORITE to make your glazes more durable, more impervious to liquids, more uniformly free of crazing. Get the benefits of a borate-salt mixture—in lowered fuel costs, increased production and profits. Write today for details and technical data sheets.

MANUFACTURERS OF FAMOUS "20 MULE TEAM" PACKAGE PRODUCTS

United States Borax & Chemical Corporation
PACIFIC COAST BORAX COMPANY DIVISION
50 Rockefeller Plaza, New York 20 630 Shatto Place, Los Angeles 5

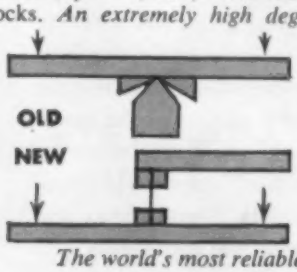
New Valentine Division Plant of A. P. Green Fire Brick Company

Heavy, sticky, lumpy materials batched with high accuracy

Heavy duty batching system requiring little headroom is also capable of handling flooding powders

DO YOU HAVE A BATCHING PROBLEM more difficult than accurately mixing raw clays and grogs which vary from oozy-wet one day to rock-hardness the next? Thayer solves such a rough-and-tumble problem by 1) engineering all the component feeders, hoppers, scales and their automatic controls as one unit and 2) utilizing the unchanging precision of the patented Thayer Plate Leverage System.

THIS EXCLUSIVE LEVERAGE SYSTEM outperforms all others. It is not affected by dust, dirt, vibration or shocks. *An extremely high degree of reliability is maintained* through the use of patented non-fatiguing Thayer Flexure Plates instead of vulnerable knife-edge pivots.



THAYER AUTOWEIGHTION is accepted as the most reliable system of batching or continuous formulating. Thayer Scales have performed millions of weighing operations without maintenance, loss of accuracy or diminished sensitivity.

The world's most reliable leverage system is also available in Thayer filling and checkweighing scales.

THE Thayer SCALE

*THE THAYER SYSTEM OF PROCESS CONTROL BY WEIGHT

AUTOWEIGHTION

THE THAYER SCALE CORP., 12 Thayer Park, Pembroke, Mass.

YARD TALK Continued

ments are still going on and they expect to introduce some new products this year.

Some other improvement work has been going on much further south: at Tri-State B&T in Jackson, Miss. President R. H. Robinson reports putting in about $70,000 worth of grinding and screening equipment. Sorry to note that Robinson's father died recently.

Five Bergen County (N. J.) locals of the BMPIU have been working together to educate homeowners and prospective homeowners to masonry. Locals 23, 25, 28, 32 and 44 are working to make the public aware of the differences between materials used for interior and exterior facings; also to focus attention on advantages of lathing and plastering.

Might as well continue in the promotion vein by reporting on the "Solid Look" which is an effort by the Pacific Northwest Brick & Tile Assoc. It's a catchy phrase they're using to attract attention of architects, etc., and as the theme for related promotion work in that section. Results look very successful, from what we've heard so far.

The same region is again working on their annual competition for students in architecture at some area schools. One of the design problems will be design of a light industrial building.

Stark Ceramics, Inc., of Canton, Ohio, recently bought 160 acres of land adjoining their plant . . . for future clay reserve, President Stewart said. Unofficial price was $40,000.

In January, page 79, we ran a story on the new inflatable dunnage cushions developed by U. S. Rubber Co.; reported that Robinson Clay Product and Logan Clay had been using. There's a new entry, now, in the brick field. We've heard that Des Moines Clay Co. used them in some shipments. Packages of 100 brick were used, with representatives of 9 railroads watching results of the first such shipment by Des Moines.

What Cheer Clay Products, another Iowa plant, has resumed construction for their new vertical sewer pipe press; cost is about

$120,000 for the press, total cost of modernization is about $400,000.

Here's a roundup of some of the new publications within our industry: TRI has a new Product Directory of the Refractories Industry, 1958 edition, listing 2700 brands of refractories produced by 185 refractory manufacturers; available from TRI in Pittsburgh . . . "For Your Convenience . . . A Competitive Brand Sheet of Firebrick and Refractory Specialties" is a compilation of Walsh Refractories, comparing Walsh products with those of competitors, evidently. . . . Tebco Face Brick made by Evans Brick Co., Uhrichsville, Ohio is pictured in a new portfolio.

M. H. Detrick Co. of Chicago has announced that the following men are now vice presidents: Ray Over, C. B. Edgar, Harry E. Lewis.

Albion (Ill.) Brick Co. has voted a stock issuance of 4,000 shares more. They plan to boost production of their 750,000 brick per month tunnel kiln to a million a month. The tunnel has been in since 1955.

A. E. Williams, general sales manager of Robinson Clay Product Co., Akron, has been elected to the board of directors . . . been with Robinson since 1916. Also at Robinson, James W. Zoller has been appointed to fill a refractory sales vacancy, succeeding the retired C. I. Thompson.

Returning to the subject of plant modernization, Cannon & Co. brick manufacturers, in North Sacramento, Calif., have added two new kilns, costing $25,000 each; complete new electrical systems; modernization of power facilities. Also Cannon has gone to using fork trucks for handling.

LETTERS Continued

plier agreements with about 40 home builders, and expect to have in the neighborhood of 35 to 38 completed brick homes ready for public inspection on June 8 of this year. Successful tie-in advertising is made possible by the Medallion Home promotion and by various appliance dealers, so that we feel we will have an extremely successful show this year, which will pay dividends to all concerned.

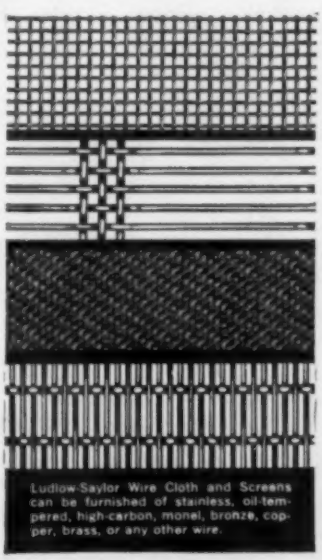
We feel strongly that this type of program can and should be used by brick manufacturers and suppliers in every metropolitan area. . . . The cost of such a program is extremely reasonable for the advertising and publicity received, especially where tie-in advertising is used. Our expenditures in last year's program were in the neighborhood of $3,850, and we estimated that we received an additional $10,000 worth of advertising and publicity from other sources.

This year's program will involve a budget of $4,000 to $4,500 for the brick manufacturers and we estimate that we will receive $15,000 to $20,000 of tie-in advertising and publicity. . . .

Guy G. Zarley
Des Moines Brick & Supply Co.
Des Moines, Iowa

Ed. Note: As a final addition to this letter, our industry should give great credit to Region 6 Director Jim Neville, Chuck Wetzler, Zarley and others in that area for their hard work in promoting brick and clay. A full story on the Minneapolis promotion appeared in the April, 1957 issue.

Leveling machines built by LUDLOW-SAYLOR guarantee L-S Screens and Cloth are free of buckles and distortion


Ludlow-Saylor Wire Cloth and Screens can be furnished of stainless, oil-tempered, high-carbon, monel, bronze, copper, brass, or any other wire.

To make sure the screens and cloth we ship are flat and accurate, free of bulges and distortion, we put them through a leveling operation on machines we built ourselves. It is an expensive extra that L-S customers appreciate, but which costs them nothing.

This typical attention to quality is why L-S Screens and Cloth are best for every sizing, straining, filtering operation. They have better dimensional stability, resistance to wear, pressure, vibration, heat. Insist on L-S Screens and Cloth—they cost not one cent more.

***Immediate Shipment** of most weaves and sizes*

Write for Condensed Screen Reference Catalog

Ludlow-Saylor
WIRE CLOTH CO.
SINCE 1856
604 S. Newstead Ave. • St. Louis 10, Mo.
SALES OFFICES: Birmingham, 1727-6th Ave. N.; Chicago, 5708 W. Diversey; Pittsburgh, Union Trust Bldg.; Houston, 1213 Capitol Ave.; Denver, 1530 Carr St. WEST COAST SUBSIDIARY: Los Angeles, Star Wire Screen and Iron Works, Inc., 2515 San Fernando Road.

"CDB . . . A VERY USEFUL AND HELPFUL PUBLICATION"

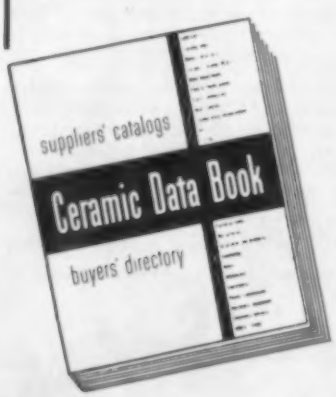
Karl Schwartzwalder,
Director of Research,
A.C. Spark Plug Division,
General Motors Corporation

Manufacturers of
automotive spark plugs

Mr. Schwartzwalder states "Congratulations on the publication of your new Ceramic Data Book! We in the ceramic industry recognize this as a very useful and helpful publication, and as past president of The American Ceramic Society I would like to add my words of praise for your valuable contribution the the industry's literature."

MAKE SPACE RESERVATIONS TODAY

CERAMIC DATA BOOK — The only catalog file of all ceramic and clay product materials, equiment and supplies. Referred to daily throughout the year by the buying and operating executives in the ceramic and clay product plants across the country.



Ceramic Data Book

5 South Wabash Ave.
Chicago 3, Illinois

Published by Industrial Publications Inc., also publishers of CERAMIC INDUSTRY, and BRICK AND CLAY RECORD.

TRI MEET Continued

Taylor Clay Products Co. This company operates a structural brick plant at Salisbury, N. C., and operates a car tunnel kiln and for the past two years have operated a shuttle kiln in the same plant.

Taylor, who prior to his present work was in charge of the construction of some 34 tunnel kilns, was well qualified to discuss the relative merits and advantages of the car tunnel kiln and the shuttle kiln.

Taylor said that in his plant they had found the shuttle kiln used the same amount of labor for the production of brick as did the tunnel, while the flexibility of the operation was equal to production in a periodic. Although the kiln had been constructed as a specialty kiln, in practice it had been found to be a production tool with a fuel cost of perhaps 30% more than the car tunnel. This higher fuel cost is offset by greater recovery of hard to burn special brick, lower maintenance of car tops and the low cost of putting the shuttle kiln into operation.

New Swank's Press

Most of the 160 who attended the meeting were able to visit the Hiram Swank's Sons plant and saw both repress and dry press production of sleeves and nozzles for the steel industry. This plant, the smallest belonging to the company, has been recently equipped with a dry press hydraulically driven to replace the more common repress operation. This machine was the high point of interest for most of the visitors although the plant was described by many as one of the cleanest and best maintained in the country.

The panel discussions were led by Chairman C. E. Lindsay and the first panel consisted of W. J. Curry, D. J. Stefl, and W. H. Wood. This group discussed the features of the plant visited the preceding day and among other items gave details of the dry press operation. Production of nozzles and sleeves require different techniques from other kinds of refractory products and the physical properties most desired are not the same as are wanted in related products. This difference prompted considerable discussion among the members attending

Continued on page 95

NOW–FIREPROOFED *Conveyor Belting...*

new SCANDURA

The original P.V.C. coated *Conveyor* BELTING

Your Safety Engineer will appreciate the non-inflammable qualities of this new amazing conveyor belt. Your Production Engineer will appreciate these unique operational features:

SCANDURA *Conveyor* **BELTING**

- Withstands abrasions that would ruin other belts.
- Exceptionally tenacious in holding fasteners.
- Solid-woven base with covers that will not strip, or tear.
- Not affected by water, dilute acids, etc. Rot-proof and mildew-proof.
- Works in temperatures ranging from 22° below to 212° above.

• • • • •

We also produce dependable, long-lasting and economical

FENTONIA & SCANDINAVIA for conveyor belting

SCANDILEX & SCANDINAVIA for transmission belting

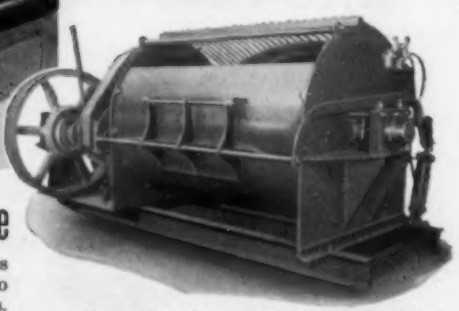
Write for free catalogue showing how you can use SCANDURA to advantage in your industry.

SCANDINAVIA BELTING COMPANY

250 CENTRAL AVENUE, NEWARK 1, N. J.

BOSTON • PLANT: CHARLOTTE 1, N. C. • CLEVELAND

BATCH MIXERS *by* BESSER



No liners or blades replaced during 4½ years service

The illustration above shows one of the two 50 Cu. Ft. Besser Batch Mixers after 4½ years of hard continuous service in a Mid-Western block plant. At no time during the 4½ years was it necessary to replace either blades or liners. Besser Mixers are built to resist toughest operating conditions. Drum shells are made of heavy rolled steel. Replaceable inside liner sections are made of Ni-Hard abrasion resisting iron. Extra heavy blade shafts prevent bending or twisting. Mixer Blade Shaft Covers eliminate build up and wear on blade shafts and permit easy cleaning. Twin spiral mixer blades are also made of Ni-Hard abrasion resisting iron. Thousands of enthusiastic users attest to Besser Mixer economy and long life performance. Ask for Bulletin No. 111-A

• *Besser 50 cu. ft. mixer with motor, V-belt drive, steel cut gears running in a continuous oil bath and fully enclosed anti-friction bearings. Other sizes available: 5, 12, 18, 25, 30 and 40 cu. ft.*

Note: All blades and liners are made in Besser Company's own foundry and licensed by International Nickel to produce and sell abrasion resisting white iron under the trade name . . .Ni-Hard.

BESSER Company, Complete Equipment for Concrete Block Plants *Alpena, Michigan, U.S.A.*

THE PRIESTER TRUCK CRANE

(PATENTED)

16 units of 500 bricks each unloaded by driver alone, merely pushing buttons.

Unloads off either side. Puts loads on sidewalk where they belong. Requires less than half the unloading space that other devices need. Handles brick or block unpalleted or palleted or packaged. Not necessary to move truck. Unloads one, two or all units at one place! No chipping or breaking bottom bricks or blocks. Gentle handling. For full details, ask for Bulletin TC53.

BRADNEY MACHINE CO., INC.

Middletown, N. Y.

CONTROL GREEN SCUM

with MINERVA FLUORSPAR

Small amounts of Minerva Ground Fluorspar effectively control Vanadium Efflorescence, when added to the drypan, in making buff or white face brick.

Control Of Pastel Shades
Is Simplified

For Glazed Brick, Minerva Fluorspar Is A *Must* To Prevent Scumming Under The Glaze.

WRITE *NOW* FOR SAMPLES AND FURTHER INFORMATION

MINERVA OIL COMPANY

Box 531 • ELDORADO, ILLINOIS

PHONE
BRidge
3-2191

L. Enrique, J. L. Hay, and Charles Ekedahl.

From left, L. J. Franz, F. A. Mueller, Carey Lindsay, G. W. Phillips, E. G. Platt.

TRI MEET Continued

the meeting although no definite conclusions were reached.

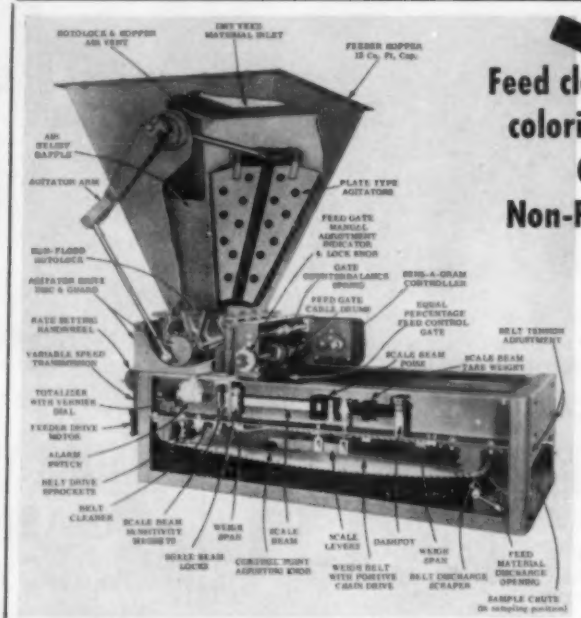
Refractory Production problems were discussed by panel of four, L. J. Franz, F. A. Mueller, G. W. Phillips and E. G. Platt. Experience gained in the outside storage of refractories seems to indicate, according to the panel, that polyethylene film is the cheapest and most satisfactory covering for outside stored material. It was recommended that black pigmented film be used as it resists the action of sunlight.

Production Problem Panel

Other subjects brought up were the control of production in a plant in a manner that is consistent with the capabilities of the plant and so that customers will have notice of a fairly accurate shipping date. A highlight of this group was a talk by F. A. Mueller regarding the proper use of young engineers in the refractory plant in a manner that will result in a profit both to the company and to the man.

The ninth operators meeting was closed with the presentation of a panel who were assigned the Subject of Tunnel Kiln Operation. This panel made up of E. L. Custer, H. H. Greene, E. A. Williams, E. H. Krautheim, brought out facts on kiln car maintenance, bearing lubrication, fuel combustion, buckstay adjustment and compared continuous vs. intermittent push.

Quality Haydite Tile Co., Alto, Texas, has been named agent for the Athens (Tex.) Brick Co. The Alto firm will serve a nine county area in East Texas. W. H. Lyons is owner of the distributing firm.



Feed clay, additives, coloring with the OMEGA Non-Flood Feeder

HERE'S WHY Omega Belt Gravimetric (weighing) Feeders handle finely pulverized materials so dependably and accurately:

1. **ROTOLOCK** — positively prevents flooding.
2. **SCIENTIFIC HOPPER DESIGN** — large inlet throat ensures full material flow to the Rotolock.
3. **BULK DENSITY CONTROL** — built-in hopper agitators and air relief vent avoid bridging or arching in the hopper . . . further insurance of proper flow through feeder.

For DRY FEEDERS Bulletins 35-N62, 35-G5A

For LIQUID FEEDERS Bulletins 32-R2, 65-H128

Omega Belt Gravimetric Feeders — in capacities from grams to tons per minute — are readily adapted for proportional feeding of many components . . . and for remote control from a central panel. Because they feed with ±1% accuracy by weight, they contribute to uniformity of end product — and help conserve valuable additives and coloring. For complete details write for bulletins. **Omega Machine Co., 407 Harris Ave., Providence, R. I.**

OMEGA MACHINE CO.
DIVISION OF
B-I-F INDUSTRIES
METERS FEEDERS CONTROLS

SPLIT LOADS

without STRAPPING

NOW YOU CAN DELIVER THREE SEPARATE LOADS OF BRICK TO THREE DIFFERENT LOCATIONS, ALL FROM ONE INITIAL LOADING. AND, WITHOUT COSTLY STRAPPING.

THE PACK-HAULER SAVES

· TIME

· MONEY

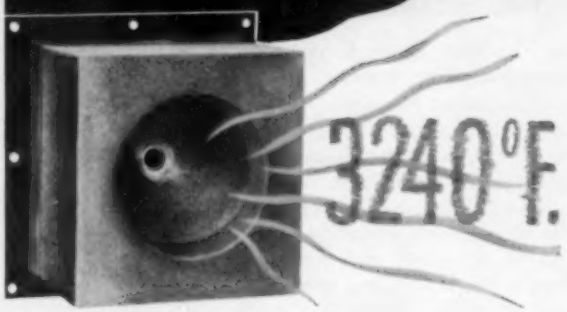
· LABOR

USED BY THE COUNTRY'S LEADING BRICK PRODUCERS

Write Today for Complete Information

AMERICAN
TRUCK & BODY CORP.
P. O. BOX 1391
MARTINSVILLE, VIRGINIA

High temperature reached with radiant gas burners without preheated air or oxygen . . . .



produced by

HAUCK "HI-RADIANT" CONE GAS BURNERS

The testing of zirconium refractories requires extremely high thermal release at high temperatures. Four Hauck "Hi-Radiant" Cone Gas Burners, installed in a test furnace 3 ft. square, produced an operating temperature of 3240°F. Although the burners were very close to the work and radiation was intense, there was no flame impingement on the zirconium refractories.

This is another example of the ability of Hauck burners to effect high speed combustion with short flame length and low forward velocity of combustion. The burners can be placed closer to the ware, with faster and better transfer of radiant heat.

Reduces the space needed for high or lower temperatures of processing. Experience shows that this burner offers great possibilities for continuous tunnel kilns in firing various ceramics.

Let Data Sheet 809 tell you more.

HAUCK MANUFACTURING CO.
Gas and Oil Burners and Equipment
145-155 Tenth Street • Brooklyn 15, N. Y.

Arlo Scoggin to Direct Stillwater Production

Arlo Scoggin has been named as director of manufacturing at Stillwater Clay Products Co., taking over the duties of the late John P. Duffy. Scoggin will direct production activities of Stillwater and its associated companies, Denison Sewer Pipe Corp. and Junction City Clay Co.

Stillwater's main office is in Cleveland.

Study Fire Clay Formation As Clue to Deposit Sites

Dr. Walter D. Keller, geology professor at the Univ. of Missouri, is beginning research to determine how fire clay is formed. Purpose of the research is to provide a means of finding likely new places for fire clay deposits.

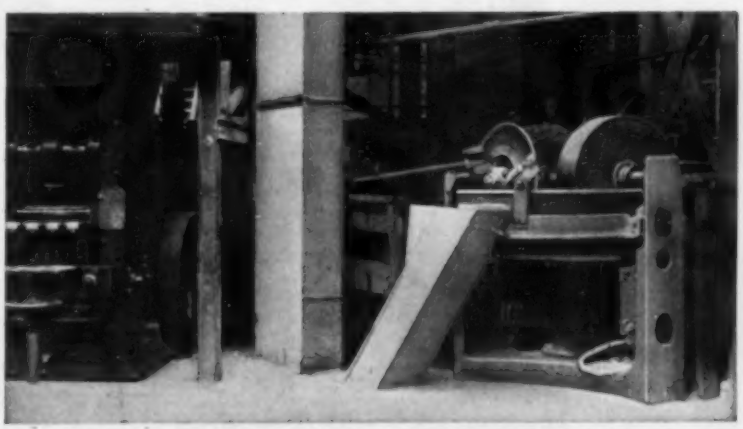
He reportedly is concentrating on the chemical analysis of a geologic series of rocks that start with volcanic rock. Intense working of known fire clay deposits is depleting Missouri's resources. For that reason, a more systematic method of deposit location is needed, the Professor believes.

MILK
Get That Springy Feeling... DRINK MORE MILK
24 or 30 SHEET POSTER DESIGNS
soundproof CLAY BRICK
tough stuff! CLAY BRICK

Arizona Association Poster Wins Prize

An outdoor advertising design used by the Arizona Structural Clay Products Association, Phoenix, was judged "the most outstanding poster design" during the sixth annual Arizona craft awards competition sponsored by the Phoenix Advertising Club. Henry Slicer of the Phoenix Brick Yard, secretary of the association, is shown pointing out the award-winning design to N. A. "Bill" Winter, vice-president of Advertising Associates, the association's advertising agency.

THE CLEARFIELD MIXER



No. 610 Clearfield preparing dry press material in fire brick plant.

Write today for Bulletin C-5 for complete information.

For Ceramic and Refractory Materials

In preparing clay materials for use in ceramic and refractory plants, the Clearfield Mixer with the revolving bottom is the most efficient and economical means of blending and tempering. Dry, semi-dry and high moisture content mixes are produced with thorough diffusion of all components of the batch. There is no segregation of larger or smaller parts. A uniform, even-textured clay mixture is produced with no lumps or voids. If you have a mixing problem, contact us for technical assistance.

CLEARFIELD MACHINE COMPANY

CLEARFIELD, PENNSYLVANIA

Pacific Coast Representative: Fernholtz Machinery Company, 8468 Melrose Place, Los Angeles 46, California

terrupting material flow it was necessary to raise office space above the floor level.

A central location for the production management office is much to be desired, and by raising the installation eight feet above the floor at the exit end of the kiln the entire plant can be observed from one spot. The area under the office is open and is used as an alley way for fork lift trucks moving from the kiln side of the offbearing belt to the loading side.

Brown instrumentation was installed on the kiln and housed in the raised office. Automatic controls are used in the furnace section of the kiln in addition to continuously recording instruments.

Use Thermocouples

As a refinement of the usual instrumentation 14 burners on each side of the kiln are equipped with thermocouples in order that the heat input of each burner in this critical section of the kiln can be balanced for better operation. The instrument stations for these extra temperature points are at each side of the kiln close to the area in which the thermocouples are located.

The Harrop tunnel kiln uses Robinson fans. Three of these are recirculating fans in the heating area of the kiln and one is used in the cooling section with one exhaust fan. Air is supplied to the burners with a 50-H.P. North American blower.

A high maturing temperature of 2050° is maintained in the furnace section of the kiln with automatic controls to actuate valves controlling the pressure of air delivered to the burners. The control is a two point system and operated to put heat into the kiln at two rates. One rate is lower than is required to maintain the proper temperature and the other is a higher rate than would be required.

The controller, by changing from one rate to the other, is able to maintain rather closely the desired temperature. Since the rates are fixed and the control is a simple matter of selection, the cost of such controls are less than would be needed for ratio controls.

The 9-2 x 6′ kiln cars were built by Rockett Manufacturing Co. and Sanford-Day bearing and Paco tops were installed. Three car pushers are used at the offbearing station, two working into the dryer with the one on the tunnel kiln making a total of five. The pusher on the tunnel kiln is controlled as to rate of feed and is equipped with a recording instrument to maintain a record of the pressure required to advance the cars. In the event of trouble in the kiln with any of the cars the pressure on the gauge indicates that something is amiss and steps can be taken to determine the difficulty.

Use Bickerstaff Fork

Brick are moved from the kiln cars to the loading area with fork lift trucks. The brick when set are put on the kiln cars in a hack that can be handled with a lift truck and Bickerstaff fork. Southern Brick is using two fork trucks, however, with the utilization such that one can do the work and the other is really just a standby unit. Southern Brick has felt a small demand for packaged brick in its sales area and is not yet using to a great extent tools they have on hand for strapping brick.

Continued on page 100

PLASTI KING QUALITY
the plastic coated glove of industry!
BUILT THIS!
OUR NEW PLANT
BUILT BY Customer SATISFACTION
#305 Palm coated
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#80 Gauntlet
#40 HP Extra heavy palm
For comfort, order Plasti-King, the glove with the seamless wing thumb—well sewn, tough, but fully flexible.
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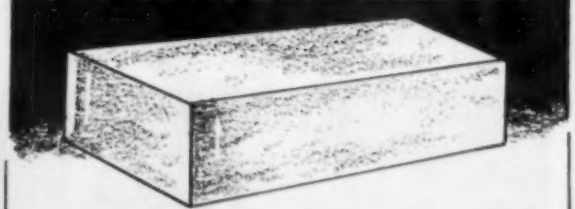

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The demand for soft mud brick is UP . . . and still growing! POTTS Soft Mud Brick Machinery means fast, easy operation plus UNLIMITED COLORS.
Get the facts today
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Write, wire or telephone
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THIS IS YOUR KIND OF SCREEN

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HERE's a dependable answer to the blinding and plugging problems of handling medium and lightweight materials when they're damp and sticky. Link-Belt "UP" vibrating screens with electrically heated cloths operate with high-velocity action . . . always perform at maximum capacity . . . assure high-volume, precise sizing.

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Link-Belt "UP" screens are available in open, semi-enclosed and totally enclosed types . . . single or multiple decks in a wide range of sizes. For complete details, contact your nearest Link-Belt office or write for Book 2377-A. 14,520

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Ridiculous?

Of course! The average brick plant operator is one of the hardest working, most energetic individuals to be found in industry today.

This is just a way of illustrating the fact that there actually are some plants *still using old-fashioned methods of handling brick!*

Evidently there *are* some plant operators who haven't heard of the savings in TIME and LABOR afforded through the use of modern materials handling equipment. And in the Brick Industry, when you think of "Materials Handling Equipment", you think of

BICKERSTAFF BRICK FORKS

AUTOMATIC MODELS

Actuated by weight of load. 4x3 lifts minimum of 300 pounds.

HYDRAULIC MODELS

Give full gripping pressure regardless of load weight.

- Experience proves labor to load and unload kiln reduced from 72 to 12 hours.
- Kiln turnover increased 25%.
- Loads directly from kiln to truck, freight car or inventory without rehandling.

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REPRESENTATIVES THROUGHOUT THE U. S. AND CANADA

West Coast Representatives:

WALTER C. STOLL & SONS

5028 Alhambra Ave., Los Angeles 32, Calif.

SCPI MEET Continued

extra-strength construction needs in non-residential construction.

Walsh urged that we use any means possible to sell brick tonnage, asking, "Are we so busy that we can't sell brick for any use that anybody wants?"

To get the RBM message across, Walsh said we need such things as cost breakdowns across the country, more education as to what RBM is and does, etc.

NAHB Preview

As the afternoon part of the meeting, a preview showing of the evening's "Merchandising Magic" was put on for the members.

The show, to be given that evening for local NAHB members, pointed out that today's builder is caught between a quality conscious market and rising construction costs.

SCR brick received considerable attention, at this point. Walsh noted that since the SCR is an integral part of the construction, not just an exterior facing, that once an SCR job is sold it's in the house, short of a complete change of construction plans and methods. Selling SCR brick to a house would prevent a later switch to a competitor's "Facing" material, Walsh stressed.

The point of the NAHB show was not so much to directly sell brick to the homebuilder as it was to show him how brick could help him sell homes.

One of the main points made in the 45-minute show was that there's a great need for a little thought and individuality in houses. The SCPI people showed, by slide and skit, some 21 ideas for adding individuality to homes: fireplaces, brick interior walls, chimneys, patios, barbeques, development tract entrance posts, etc.

All of these ideas were classed as "built-in merchandising" aids to the builder.

SOUTHERN Continued

At the loading station the cubes of brick are removed from the tunnel kiln cars and placed on the truck beds with the fork lift truck. The brick are inspected and placed in the normal hauling load in one operation. In the event brick on a tunnel car are scheduled for stock the brick are removed from the cubes and placed into a Pack Hauler cube and moved with a bobtail truck to the storage area.

The modernized productive unit is housed in an aluminum sheeted pipe frame building 120 feet wide and 435 feet long with a 75 x 30 wing housing the machine room. Building construction work was done by A. L. Jarrel & Sons. The first brick were drawn from the new kiln in February of 1957 when the completed work was turned over to the company by Richard Chamberlain, the construction engineer for Harrop Ceramic Service.

The personnel of the company is headed by Joe H. Patrick who has been president since the physical facilities were purchased in 1935. L. B. Adams is vice president and H. G. Bledsoe secretary. The superintendent of the tunnel operation is C. A. Perry and the periodic plant is under supervision of C. R. Lamar who also handles all shipping from the combined plants.

Read what Bill Belden, Belden Brick Company says about Champion Masonry Blade

August 6, 1957

Hutt Scaffold & Equipment Company
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Canton, Ohio

Mr. Paul Hutt

Dear Sir:

We are pleased to enclose another order for Champion Diamond Saw Blades. Our experience with these blades thus far has been most pleasant. We are getting as many as five and six thousand cuts out of some blades, and our cost per cut has been slightly less than five cents. This is blade cost only, of course.

We have tried several makes of blades and as yet the Champion blade has outperformed all others. Furthermore their price is the lowest.

Trusting that you will make prompt shipment of this order, we remain

Sincerely yours,
THE BELDEN BRICK CO.
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For the complete Champion Story, write or phone collect today.

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THE O. HOMMEL CO.
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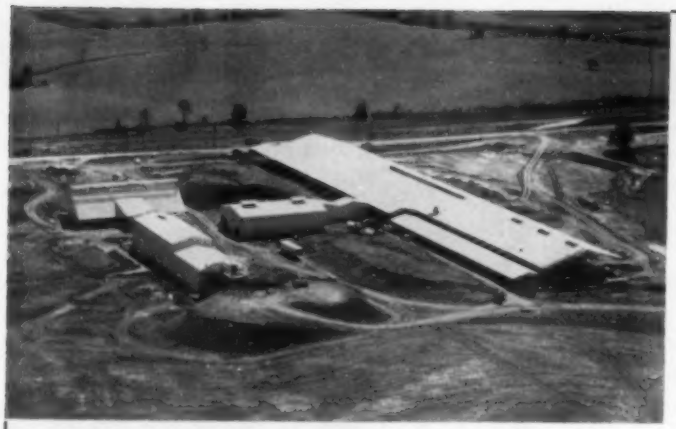
WEST COAST—4747 E. 49th STREET, LOS ANGELES



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Approximately 110,000 sq. ft. of floor space

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● Mallix plates and bars are made from a specially heat-treated material. Tough but not brittle, they stand up under severe service without breaking—will outlast all ordinary types. A-5503

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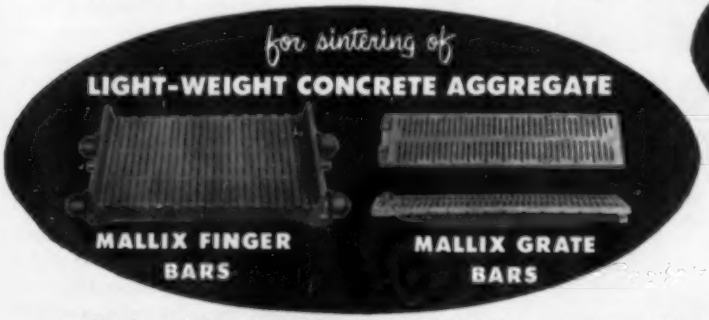
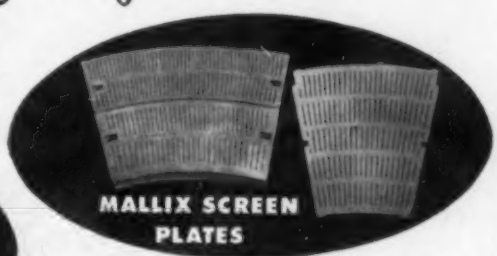
LIGHT-WEIGHT CONCRETE AGGREGATE





Since Mallix plates are harder and stronger than most, slots can be more closely spaced. Uniform sizing is assured by their smooth, clean openings. Their tapered slot design keeps material flowing freely.

Mallix finger bars give uniform air distribution and have excellent self-cleaning properties. Can be furnished for any desired slot openings.

Tough Mallix grate bars will give you economical grate bar cost per ton of light-weight concrete aggregate. Straight slot, pinhole or herringbone type bars are available.

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Giant Lantern Slides Used For Study of Refractories

An unusual technique for illustrating the microstructure of refractories, and applicable to many other problems, has been developed by C. Burton Clark, Research Mineralogist of Harbison-Walker Refractories Co., Pittsburgh, Pa.

It consists in combining a series of natural color photomicrographs to form giant lantern slides 24 inches long by 3¼ inches high for projection with the standard 3¼" x 4° lantern slide projector.

The method was described and used by Clark in a paper presented at the New York meeting of the American Institute of Mining, Metallurgical and Petroleum Engineers, February 17, 1958. The projectionist slowly moved the long slides through the projector as the author described them.

The study had been prompted by the lack of published data on the mineralogical changes produced in refractories during service in copper metallurgy. Basic refractories from a copper converter was selected as the first phase of a broad investigation of refractories in the metallurgy of copper.

Both polished sections for microscopic examination with reflected light and thin sections for use with trans-

mitted light were employed, but the reflected light technique was chosen to illustrate the microstructure of the refractories since many of the minerals were found to be opaque.

Although reflected light has been used in the microscopic examination of metal specimens for many years, the technique has been applied extensively in the examination of refractories only during the past ten years.

Aside from the value of recording the brightly colored suite of minerals in natural color, minute detail of the infiltration of metallic copper and copper minerals into the brick structure could not be as effectively portrayed with black and white photomicrographs.

Also, the progressive change in the microstructure of a polished section cut perpendicular to the working face of the brick could not be shown as effectively with a series of separate lantern slides as with a number of serial photomicrographs combined into one continuous strip or panorama and projected as a single slide.

In making the photomicrographs, a mechanical stage was used to transport the polished brick section across the stage of the microscope. A slight overlap of consecutive views was provided so that the color transparencies could be cut through the overlaps and abutted into a continuous color strip.

To aid in accurate focusings, and to secure identical exposures in each section of the color strips it was imperative that a carbon arc of constant and sufficient intensity be used for il-

Continued on page ??

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Engineering for the Ceramic Industries

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For face brick, tile, refractories, sewer pipe.

DRYERS

Continuous type for ware on kiln and dryer cars, and for sewer pipe; room type for sewer pipe and refractory shapes. We have many in successful operation.

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SEND SAMPLES OF YOUR BRICK

Put through the ROCK-FACER, they come out with a straight-chipped edge for laying neat course quickly. YOU judge profit potential. Prices and specifications on request.

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Avoid costly injuries to the hands of your workers by giving them the protection they need—Tufhorse gloves, hand pads or mittens. Made of the finest cowhide, they are flexible and comfortable to wear.

ORDER SAMPLE PAIRS AT "PER-DOZEN" PRICES

Please send me samples of
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IN MINUTES . . . INSTEAD OF DAYS

Samples obtained from depths up to 100 feet with the all new

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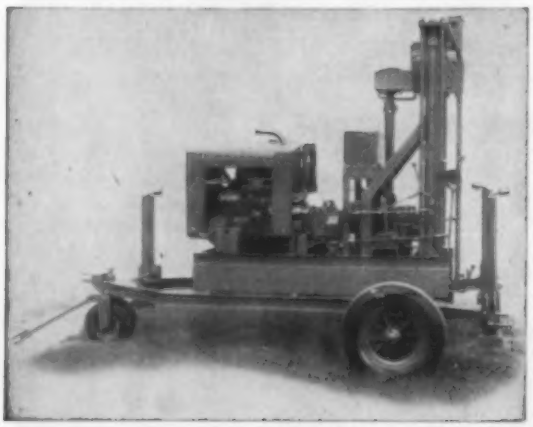

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Drakenfeld offers you practical help in solving color application problems. Our experienced technologists and the most modern color research and production facilities are ready to serve you. We invite your inquiry.

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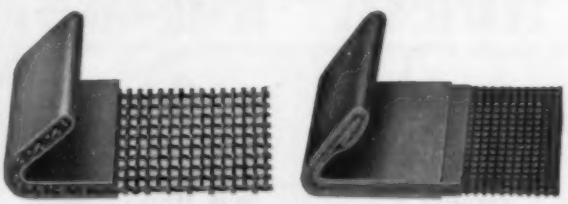
Tyler Screen Sections for All Makes of Screening Machines!



Screen sections of Tyler Woven Wire are fabricated for all makes of vibrating screens in any mesh or metal. They are made up with hook-strip or bent-edge construction to suit the machine on which they are to be used.

Tyler rugged, accurately-applied hook-strips make possible stretching and maintaining the screens at drum-head tension, which is essential for successful screening and long screen life.

THE W. S. TYLER COMPANY

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Manufacturers of Woven Wire Screens and Screening Machinery

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LANTERN SLIDES Continued

lumination. Light intensity was measured with an exposure meter.

Trial exposures were made with various filter combinations until the color temperature of the illuminaton was matched to the color temperature of the color film. Pieces of lantern slide glass, 24 inches by 3¼ inches wide, had been obtained directly from the glass manufacturer. Between pairs of these, five consecutive color transparencies were mounted together representing a narrow band of brick ¼" long perpendicular to the working face, and having a magnification of 80x.

Thus, a set of three long color slides illustrated the microstructure of the brick from the slagged working face to a distance of ¾ inches into the interior.

For safety and convenience in handling, each slide was bound with tape and encased in a wooden frame which was constructed to fit the slide carrier of the projector. These were handled safely by the projectionist who merely had to replace the standard slide carrier and insert the long wood-framed slides directly into the projector.

Wehr Steel Merges With Dings, C, B&W

Wehr Steel Co., Milwaukee, has announced the merger of its company with Dings Magnetic Separator Co. and subsidiary companies, including Chisholm, Boyd & White Co. of Chicago.

Three companies, Dings, Chisholm, Boyd & White and Carnes Corp. will now be divisions of Wehr, according to the announcement. The merger took effect Feb. 1.

Hyster Merges with Martin Machine Co.

Merger of the Hyster Co., Portland, Oreg., with the Martin Machine Co., Kewanee, Ill.. has been announced by Philip S. Hill, Hyster executive vice-president.

"Hyster Co., with no change in name, is now a Nevada corporation," said Hill. "The corporate change will not have any effect on the operation or location of our present factories and offices nor are operational or personnel changes contemplated. Dealer relationships remain unaffected."

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GEM is one of the oldest, yet most modern clay forming plants in the field of engineered refractories. In supplying the refractory requirements to a wide variety of industry, GEM has more than kept pace with developments in the refractory field in both contributions and production skills.

We are equipped to press light and heavy refractories, extrude and cut shapes to your specification. Send prints for prompt engineering service on estimates and samples.

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R&I Adds Firebrick To Product Line

Regular fireclay firebrick has been added to the line of bonding mortars, castables and insulating materials of Refractory & Insulation Corp., New York City.

The firebrick is available in all standard sizes and shapes, in medium, high duty, and super duty.

Sales, Income Off At Illinois Brick

In a report to their stockholders, Illinois Brick Co., Chicago, reports that net sales in 1957 were $5.6 million, as compared to 1956 sales of $6.1 million. Net income after taxes for 1957 was $545,408, or $2.66 per share, as compared to 1956 figures of $682,585 and $3.33.

Guy Gamble Dies

Guy M. Gamble, 69, former superintendent of the Fulton (Mo.) Fire Brick Co. died in February of a heart attack. More recently Gamble had been with Harbison-Walker Refractories Co. at Clearfield, Pa. He was Fulton superintendent from 1922 to 1928.

Denver Man Wakefield Makes TV Appearance

Don A. Wakefield, recently appointed regional director for SCPI-Region 12, in Denver, appeared with Mona Freeman, Frank Fontaine and local celebrities as part of the promotion effort for the touring SCPI sales convention. Wakefield, formerly with Region 5 in St. Louis, told us that they had a "fabulous turnout of 330 home builders, home type masons, contractors, a few architects and wives" for the SCPI show and related NAHB presentation. Wakefield reports getting an extra 40% attendance by inviting wives, who brought along husbands who hadn't originally planned to attend. In the photo, Wakefield is at the far left; then Fontaine, Freeman and local TV personality, Pete Smythe.

Spotting TUNNEL KILN CARS *is easy - - -*

with a KING CAR PULLER

A King Car Puller means easier handling and spotting of tunnel kiln cars for Charles Taylor & Sons, Cincinnati, Ohio; unit shown is at their Kentucky refractory plant. Let it save for YOU. Vertical or horizontal spool.

Also, spots freight cars on sidings, barges at wharves and serves many other purposes in and around brick and clay products plants. Rugged, minimum maintenance. There is a size for your requirements.

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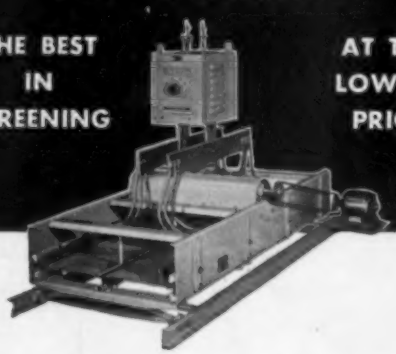

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Racine, Wisconsin
Quality Screens Since 1919

Besser Introduces Hi-Lite Block

Hi-Lite block, an attractive design block for both exterior and interior walls, was recently introduced by the Besser Co. Based on the conventional 8" x 8" x 16" masonry unit, Hi-Lite block features single and double raised pyramid facing designs that enable architects or builders to create a myriad of patterns and dramatic architectural effects.

Hi-Lite block, according to the company, will give blockmakers a new competitive block for the building industry. Its sculptured appearance adds glamour to ordinary block.

The block can be made from lightweight or dense aggregate as fast as standard block. With only a few additional mold parts, blockmakers will be able to gain full production of Hi-Lite block in a matter of minutes, the company states. And the same set of mold parts fits all standard wall widths.

Clay Aggregate Used for Roads

A street in Sulphur Springs, Tex., was to be paved, in part, with a clay aggregate made by Thermo Aggregate Engineers. The aggregate was to be mixed with 25% sand as a binder, and then coated with asphalt and chat.

Thermo Aggregate has a plant a mile from the A. P. Green Fire Brick Co. plant in that area. The aggregate is fired in a rotary kiln, with a second kiln expected to be added in May.

Co-owners of Thermo, Howard Hicks and Henry Ball, Jr., said that sufficient orders are in prospect for highway construction to assure capacity operation.

4 BIG REASONS WHY

Hanco ELECTRIC SCREEN HEATERS serve best in American Industry

1 • ELIMINATE BLINDING
2 • INCREASE TONNAGE
3 • BUILD GREATER PROFITS
4 • SPEED PRODUCTION

We welcome your inquiries. Be sure to include materials for screening and equipment in use. Hannon engineers will make recommendations which will increase your production and reduce your screening costs. Data sheets available without obligation.

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Hanco

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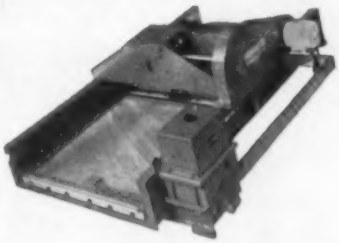


The Clean Appearance of the Leahy® Screen is Matched by Superb Performance

Engineers often comment on the clean, sleek lines of the Leahy No-Blind® Screen when it is equipped with integrated FlexElex® heating of the jacket.

This appearance derives from primary functional considerations as a result of carefully engineered design. For capacity, accuracy and economy of operation there is none to equal the Leahy Screen. Notice the complete absence of bothersome flexible transformer connectors. Direct connected bus bars not only thus reduce maintenance, but they cut power consumption and eliminate the need for breaking and remaking of electrical connections during jacket changes.

Send for Bulletin 16-EH

THE Leahy NO-BLIND VIBRATING SCREEN

— offers —

INTEGRATED HEAT SCREENING

THE DEISTER CONCENTRATOR COMPANY

The Original Deister Co., Est. 1906

913 GLASGOW AVE. FORT WAYNE, IND.

...it's **FOOTE CHROMITE**

for that "natural" coloring in Bluish Gray Bricks

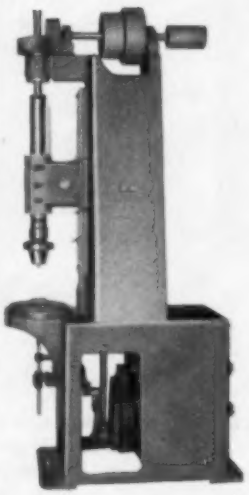
Foote Chromite, when added to buff burning clays, produces highly attractive bluish gray shades that match closely the many shades of natural limestone. Additions of this natural chrome ore in quantities as small as ¾ to 1% produce appreciable coloring values at moderate firing temperatures. Screen analysis of Foote air-floated Chromite is rigidly held to assure uniformity of tone and color development.

Write for complete details on Chromite, Ebony Manganese Ore, Petalite, and Foote's many other ceramic materials.

Foote MINERAL COMPANY

FOOTE MINERAL COMPANY
442 Eighteen West Chelten Building
Philadelphia 44, Pa.

BAIRD CLAY MOULDING MACHINERY



BUILT IN 4 SIZES
FOR WARE UP TO 12" DIA.

FLOWER POTS
FERTO POTS
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Also
BAIRD PUG MILLS

OVER 40 YEARS OF SERVICE

—Manufactured by—

SIMMONS BOILER & MACHINE CO.
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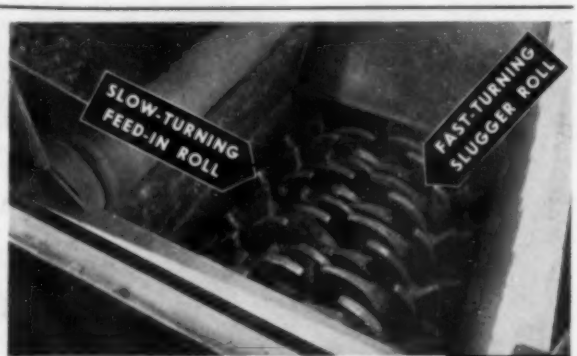
SUPER CONFIDENCE!

MIXMAX PUGMILL KNIVES

Custom Built For Each Installation
Proven Outstanding in Pugging for:

- BUILDING BRICK & TILE
- REFRACTORIES
- SEWER PIPE
- DRAIN TILE

STRAIGHT ENGINEERING CO.
ADEL, IOWA • U.S.A.



THE EAGLE IS THE CRUSHER WITH THE BIG APPETITE!!!

The slow-turning feed-in roll and opposing fast-turning slugger roll positively break up clods of clay or shale as fast as the rolls can get their teeth into them.

Clays or shales are crushed down to ideal size for feeding to dry pans, grinders, or smooth rolls.

The exclusive cutter-crusher-hammermill action of the Eagle Clay Crusher plus its low maintenance cost, is saving money for a great number of brick and tile, refractory, and sanitary ware plants. Three sizes. Send for Bulletin 952.

THE EAGLE LINE

GRINDERS

CLAY CRUSHERS

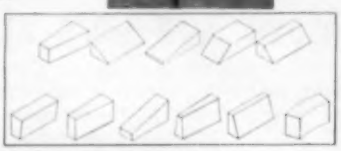
SHALE PLANERS

SINCE 1872
EIW EAGLE IRON WORKS

EXPERIENCE, PROGRESS, SERVICE SINCE 1872
EAGLE IRON WORKS
131 HOLCOMB AVE., DES MOINES, IOWA

NEW GREEN BRICK CUTTER for SHAPES

★ WELL BALANCED TOGGLE ACTION
★ SMOOTH CLEAN CUTS
★ ACCURATE CUTS
★ QUICK-CHANGE
★ SAFE



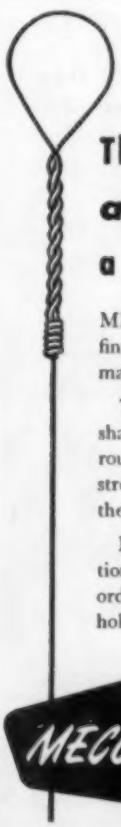
CUT YOUR SHAPES FROM VACUUM EXTRUDED CLOTS →

SUPERIOR SUPPLY SERVICE, INC.

P. O. BOX 124 BESSEMER, ALA.

MANUFACTURER OF BRICK MAKING EQUIPMENT

BRICK & TILE DIES
MOLD BOXES & DIES FOR
DRY-PRESS RE-PRESS
TEXTURE DEVICES
SPECIAL PURPOSE EQUIPMENT



The Right Twists and Turns *assure* a "Fracture-Free" Loop and Lock

MECO Clay Cutting Wires are recognized as the finest. They are made of Swedish alloy steel on automatic machines, and are true to size.

They are better and last longer. Made with pear-shaped loops, they hold their length and prevent round loop "fracture." Circular loops "give" when stretched and *become* pear-shaped, causing slack in the wire.

MECO wires have a special twist, with an additional tight wrap, making them superior to wires with ordinary spiral wraps that slip under tension. They hold their maximum strength and stability.

A trial order will convince you.

MECO

The Manufacturers Equipment Co.
218 Madeira Avenue, Dayton 4, Ohio, U.S.A.

ORGANIC BINDERS

GLUTRIN
(liquid)
or
GOULAC
(powder)

Especially suitable for increasing the molding and dry strength of

- **BRICK**
- **CLAY REFRACTORIES**
- **NON-CLAY REFRACTORIES**
- **SILICA REFRACTORIES**
- **REFRACTORY CEMENTS**
- **PLASTIC REFRACTORIES**
- **TERRA COTTA**
- **STRUCTURAL TILE**
- **SEWER PIPE**
- **SAGGERS**
- **FLUE LINING**

Small amounts required — easy to use. Economical and larger production of first quality product absorbs the investment many times.

Many successful users. We'll be glad to submit samples and our suggestion on procedure and amount needed.

Robeson Process Company

American Gum Products Company

P.O. Box 960 • Erie, Pa.

CONSISTENCY...

how's your firing insurance?

ORTON CONES'

high degree of controlled standardization in manufacture is your assurance of uniform, quality ware — car setting to car setting — kiln to kiln.

Orton cones are one of the most reliable means of checking on the firing conditions within your kiln. Orton cones of a given number can be relied upon cone after cone, week after week, year after year, to perform uniformly. This means there is *no* guesswork.

And, because of this uniformity in firing behavior, instrumentation of various kilns can be checked for discrepancy, effectively and economically.

No matter what your operation, there are Orton cones to meet your requirements. If you are not presently utilizing this time-tested and proven method of control, write today for the table of temperature equivalents and the free, 56-page booklet, "The Properties and Uses of Pyrometric Cones." You'll see how the utilization of cones can mean an increase in uniformity of ware, and result in substantial savings.

Foreign Sales Agent: **International Division, The Ferro Corporation, 4150 East 56th Street, Cleveland, Ohio, or the Foundation**

the firing insurance of thousands

The Edward **ORTON** Jr. Ceramic
FOUNDATION
1445 Summit Street • Columbus 1, Ohio
AXminster 9-8023

Move Kiln Cars at Big Saving!

"We just couldn't do without our Gravelys" . . . write important brick and tile manufacturers who've been using them for years for moving kiln cars in and out of kilns and to other stations.

The Gravely LS Tractor — geared-down 5-HP, low-speed model, with dual wheels and governor — is the answer. It's small enough to work in crowded areas, yet powerful enough to move loaded cars up to 310,000 lbs. Toolholder fits coupling unit on cars. Two speeds forward and reverse allow operator to move cars in either direction.

But that's not all! The same Gravely, offering 30 different attachments, takes care of every grounds maintenance job, from mowing lawn areas to power sweeping loading docks and drives. Eliminates expensive equipment, saves time, labor, money.

Write TODAY for descriptive literature, or for Free Demonstration under your own conditions. No obligation.

GRAVELY TRACTORS, INC.
BOX 465 DUNBAR, W. VA.
PERFORMANCE-PROVED SINCE 1922

ATTENTION BRICK MANUFACTURERS!

Do You Demand the Same EFFICIENCY From Your BURNERS As You Do From Your EMPLOYEES?

To Get the Maximum BTU's From Your Gas, We Suggest You Try An Efficient SCHURS Atmospheric Gas Burner . . . and

"Be Sure It's Schurs!"

SCHURS NO. 1 GAS BURNER

Designed for all types of updraft and downdraft kilns, driers, furnaces, etc., requiring no fan or other mechanical air supply. Note needle control valve which is built into the burner so that full gas pressure is available at burner orifice.

The Gas You Save During the First Few Months Operation May Pay For the Installation. We Would Appreciate the Opportunity of Demonstrating Schurs Efficiency in Your Plant.

Schurs Oil Burner Company
(Established 1905)
8500 Zamore Avenue Los Angeles 1, Calif.
LUdlow 8-9229

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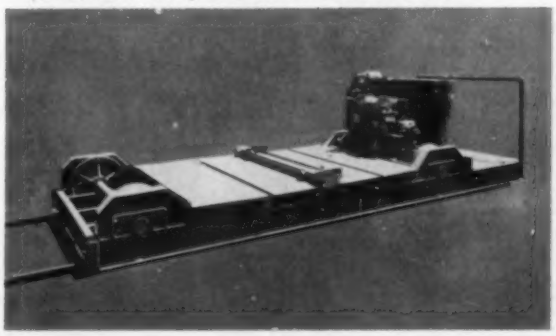
*See Our Catalog in 1957-58 Ceramic Data Book

ENGINEERING ASSOCIATES, INC.

P. O. BOX 5284 **ASHEVILLE, NORTH CAROLINA**

The EA Hydraulic Transfer Car has brought response that has amazed even us. The smooth drive has proven itself not only in red brick plants, but also in refractories, sewer plants. New plants have been designed and built around the use of a pusher on the car and existing plants have been improved based on same. Why not look into this?

Represented By: **Forrest A. Paschal**
Box 289, Siler City, N. C.



Call FERNHOLTZ First!
Fernholtz Machinery Co., 8468 Melrose Pl., L.A. 46

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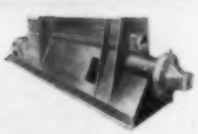
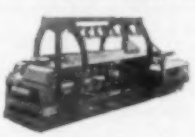


INTERNATIONAL AUGER MACHINES

Combined double-deck de-airing Auger Machine and Pug Mill. Newest features including all bearings accessible from outside machine. For extruding brick, tile, sewer pipe.

Write for Bulletin #63 BC

THE FINEST OF SERVICE AND EQUIPMENT FOR EVERY PHASE OF THE BRICK, TILE AND CLAY PLANT



REEL TYPE TILE CUTTER

Electric or Hydraulic Cutter for brick, building tile, drain tile, quarry tile and roof tile.

Write for Bulletin #84 BC

INTERNATIONAL DRY PRESS

Special Heavy Duty Dry Presses for brick, tile, refractory brick, insulating brick, and paving block, de-airing available.

Write for Bulletin #66 BC

MAIL THIS COUPON FOR DETAILS

FERNHOLTZ MACHINERY CO.
8468 MELROSE PLACE, LOS ANGELES 46, CAL.
Please send me Bulletins # checked.
☐ #63BC, Auger Machine ☐ #84BC, Tile Cutter
☐ #66BC, Dry Press

NAME.....
ADDRESS.....
CITY..... ZONE... STATE.....

FERNHOLTZ MACHINERY CO.
8468 Melrose Place, Los Angeles 46, Calif. OL 3-2360

Classified Advertisements

Notice

New Classified Advertising Rates

Effective January 1, 1957

Limited to Want Ads, Consulting Engineers, or Used Equipment ads, (wanted or For Sale.)

TRANSIENT WORD ADS: 12c per word for each insertion.

Headings such as "Wanted", "For Sale", etc. and address to be counted as part of the ad. Minimum charge $2.00 each insertion.

POSITION WANTED ADS: $1.50 for 25 words or less; each add'l word 10c.

FOR USE OF BLIND ADDRESS: (Care of BRICK & CLAY RECORD) count as 15 words to cover cost of handling and forwarding replies.

DISPLAY-BOX TYPE ADS

$15.00 per inch. On advance orders for twelve consecutive issues, 12.00 per inch per insertion. (No retroactive adjustment).

An inch is measured vertically on one column, 2¼" wide; three columns on a page. For a two-column advertisement add together height in each column.

Display classified advertisements are set and rates apply in half-inch multiples. (1 inch minimum; 5 inch maximum).

Add 25% to above rates for Reverse Plate (white lettering on black background).

All rates based on payment in advance except on regular contract.

No Agency Commission or Cash Discount

BRICK and CLAY RECORD

5 South Wabash Avenue, Chicago 3

WANTED—HELP

WANTED
Sales Engineer

Refractories specialty company needs full time traveling representative. Must have ceramic experience. Salary.

Ipsen Ceramics, Inc.
Pectatonica, Ill.

Wanted — Ceramic engineer with experience in manufacture and marketing of quarry tile and allied products. Contact Bruce R. Draper, 2535 Franklin Road, Nashville, Tenn.

CERAMIC ENGINEERS WANTED—Positions open for graduates in ceramic engineering who are desirous of working in heavy clay products with a large eastern concern. Duties entail research and plant quality control and supervision. Some experience in heavy clay wares desirable, although not necessary. Reply to the Robinson Clay Products Co., P. O. Box 1070, Akron 9, Ohio, attention of Clark Sutherland, V.P.

WANTED
SUPERINTENDENT

Tunnel Kiln producing Face Brick. Advise experience and other details.

Address Box 4-TBB,
care of BRICK & CLAY RECORD

WANTED — POSITION

CERAMIC ENGINEER. B.S. Degree. Age 38. 12 years' experience in research, plant operation, design and construction in structural clay products and refractories. Address Box 4-TBF, care of BRICK & CLAY RECORD.

WANTED—POSITION

CERAMIC ENGINEER. Would like to re-locate with modern firm anywhere in good market area. For the past 3 years have been a brick plant manager with a total of 7 years' experience in all phases of the industry, including sales. Will need two months to terminate present ties. Age 35, married, and in good health. Address Box 4-TBC, care of BRICK & CLAY RECORD.

POSITION WANTED—As superintendent or general manager of brick or hollow tile plant.. Have twenty five years experience and am capable of handling operation from clay pit through to the finished product. Can furnish best of references from former employers. Address Box 1-RAK in care of BRICK & CLAY RECORD.

FOR SALE—USED EQUIPMENT

FOR SALE—3 Brick Forks, lift all hydraulic, fits most lift trucks, squeezes skid brick, no pallet required. 1 Scoop attachment for fork trucks (about ⅝ yard capacity). 1 concrete mixer with lifting feed hopper Koehring size 7S with rubber tires, Wisc. 4 cylinder engine. 1 wrecking ball (1500 lbs.) All above equipment in very good condition. The Galena Shale Tile & Brick Company, Galena, Ohio.

FOR SALE—USED SOFT MUD EQUIPMENT

1. Lancaster 7 mold Auto Brick machine, model 36, horizontal inside press with 50 hp motor.
2. Lancaster Automatic Pallet Car Loader.
3. Martin Mold Sander and Sifter.
4. 14,000 Ohio galvanized #12 pallets 10½ x 34½.
5. 126 Soft Mud Cars, 24" gauge, equipped for automatic pallet loader.
6. One Chambers Twin Tub Pugmill, without drive or clutch.

WEST BROTHERS BRICK COMPANY
6600 Sheriff Road Washington 27, D. C.

MACHINERY BARGAINS

DRY PRESS Boyd Model BB including 10 H.P. Motor and Drive.

COMBINED MACHINE STEEL No. 5, Steele and American De-Airing Combined Machines. International 470.

BRICK CUTTERS Steele and Freese Automatic.

SEWER PIPE PRESSES Pearne Lacy Hydraulic including dies 6 to 15", Tappin Rice including dies 8 to 24".

FERNHOLTZ MACHINERY CO.
8468 S Melrose Place
Los Angeles 46, California

DRYER CARS

172 Single Deck Price $20.00 Each

All sections rails and track supplies. New Wood Pallets made to your specifications.

M. K. FRANK

401 Park Bldg. Pittsburgh 22, Pa.
480 Lexington Ave. New York 17, N. Y.
185 Lake Street Reno, Nevada
1209 Metropolitan Bank Bldg. Miami 32, Florida.

FOR SALE—4 North American 123-5 burners (gas), 6 North American 123-3 burners (gas) with mounting plates and tile, plus butterfly air valves, limiting orifice gas valves, and gas cocks, all like new. Also 8 Anthony A3 Nebulyte burners used on round down draft kiln. One North American 625 CFM, 16 oz. blower, without motor. Prices on request. Ceramo Company, Inc., Jackson, Missouri.

FOR SALE—USED EQUIPMENT

Side Dump Cars: 120—1½, 2, 3 and 12 Yards
Gasoline Locomotives: 4, 6, 8 and 14 tons
Diesel Locomotives: 6, 10, 25, 45, 65 and 80 tons
Smooth Roll Crushers: J. C. Steel 12" and 18"
Automatic Cutter: Freese Model C-25
Rotary Dryers & Kilns: 4'x20', 5'6"x50', 80"x60', 8'x125'
WANTED—Air Compressors—Dryers

R. C. STANHOPE, INC.
60 E. 42nd St. New York 17, N. Y.

FOR SALE

De-Airing Machines:
Fate Root Heath Junior, Type 7
Fate Root Heath Senior, Type 12
American No. 290

Sewer Pipe Press:
Stevenson Single Rod

Dry Pans:
Eagle Seven Foot
American Nine Foot

Blowers:
144" x 72"
108" x 54"

WALTER C. STOLL & SONS
5028 Akambra Ave.
Los Angeles 32, Calif.
Capitol 2-1141

FOR SALE

DRY PAN—Clearfield, good as new.
CRUSHER—McLanahan 16" x 24" renewable teeth.
BRICK & TILE MACHINE—Chambers Royal de-aired. With spare parts.
CUTTER—Steele 18B—14" wide measuring belt.
FEEDERS—Apron with motor drives 24" x 10', 30" x 10' with hopper, rebuilt.
BALL MILLS—6' x 5', 6' x 10' drives with brakes.
DRYER CARS—Single deck 24" guage, Pallet cars.
MIXERS—Simpson & Clearfield.
New & Used rebuilt equipment for the clay industry.

HERMAN A. HALL
WYOMISSING, PA FRanklin 24310

FOR SALE

PEBBLE MILLS: Batch & Continuous, 5' x 10', 6' x 8', 6' x 8', 5' x 6', 4'6" x 12'.
ROTARY DRYERS & KILNS: 8' x 125', 9' x 30', 8' x 50', 4'6" x 40', 4' x 30', 3' x 15'.
POWDER MIXERS: 336, 100, 75, 15 cu. ft. Spiral Ribbon, 54 cu. ft. Conical.
INTENSIVE MIXERS: Simpson #3F, 1H Stainless steel, #9.
11—C. I. F. & F. Filter Presses, 24" x 24", 30" x 36", open and closed delivery.

PERRY EQUIPMENT CORP.
1432 N. 6th St. Phila. 22, Pa.
POplar 3-3305

Small Bay Auger Machine 10" auger.
Brick Plant Machy: Dry Press, combined mach. 9' dry pan, cutters, etc.
Deared Rawdon Pipe Machine.
Berg, Boyd 4 mold, Gates 2 mold DRY PRESSES.
BRICK MACHINES: DEAIRED: Steele 40, Bonnot 407, Amer 404A, 288, FRH WJ6 & Jr. Chambers 90; Intl. Vac-Air Chemist.
5', 7', 9' DRY PANS, 10', 12', 14' PUGMILLS.
MILLS: 3 x 8, 8 x 8, 6½ x 6, 6 x 15, 7 x 24 Ball, 3½ x 7 Rod, 5 x 17, 5 x 22 Tube. Gruendler #1, 2XC, Univ. #1 & #3 Hammer, 2 SP Mikro, Kent #7.
DYERS: 2 x 20, 4 x 35, 5 x 21, 6 x 30, 7 x 60, 6 x 125.
CUTTERS: Steele #18, Chambers 22, Amer 498B.
CRUSHERS: 1880, 2424 sgl. roll. Walker Elliott Rotary, Steele 1232, 1832. Brewer conical 1822.

Repros: Bonded Scale & Machine Co.

MID-CONTINENT EQUIPMENT CO., INC.
8321 Gannon St. Louis 24, Mo. Wydown 1-2826

FOR SALE—One Meco waste heat fan complete with 10 hp 220-440 volt motor, magnetic starter with push buttons. Two metal walk-in inspection doors, boiler, louver, etc. Excellent condition—priced right. Fan is 4-blade 54". Address 4-TBE, care of BRICK & CLAY RECORD.

FOR SALE—USED EQUIPMENT

FOR SALE—Kiln oil burning equipment—10 burners, air compressor with 7½ hp motor, 970 c.f.m., electric heater 10 kw, 2 circulating pumps, gauges, strainers, air pipe, etc. Salisbury Brick Co., Inc., P. O. Box 254, Salisbury, Md.

FOR SALE

BRICK MACHINES—Combination & Desiring
PUG MILLS—Single & Double Shaft
GRANULATORS—Chambers 51 & Freese 16
CUTTERS—Steele 18, Freese & Hand
DRY PRESS—Boyd 4 mould Special
DRY PANS—7', 9', 10'
HAMMER MILLS—Many sizes & Micro
SMOOTH ROLLS—16x30, 30x36
CONICAL ROLLS—Smooth & Corrugated
DISINTEGRATERS—12", 18" & 24"
JAW CRUSHERS—9x16, 15x24, 24x13, 24x36
ROTARY DRYERS & KILNS—2x20, 3x30, 6x40, 7x120
BLENDER—Patterson-Kelley Twin Shell
LAB BLUNGER—50 gallon
HAND TILE PRESS
MIXERS—Lancaster EAG 3 & 4, Clearfield & Blystone
SCREENS—Hummer 3x5, 3x10, 4x10, Cedar Rapids 3½x10, Single, Double & Triple Deck
REPRESS—Bonnot 2-mould
FEEDERS—Disc, Apron, Reciprocating
HARDINGE CONICAL MILLS—3', 7', 10'
PEBBLE MILLS—Various Sizes
DRYER CARS—200 Single Deck 24" ga.
List your spare equipment with us

ROBERT L. CLARE
212 Rector St. Perth Amboy, N. J.
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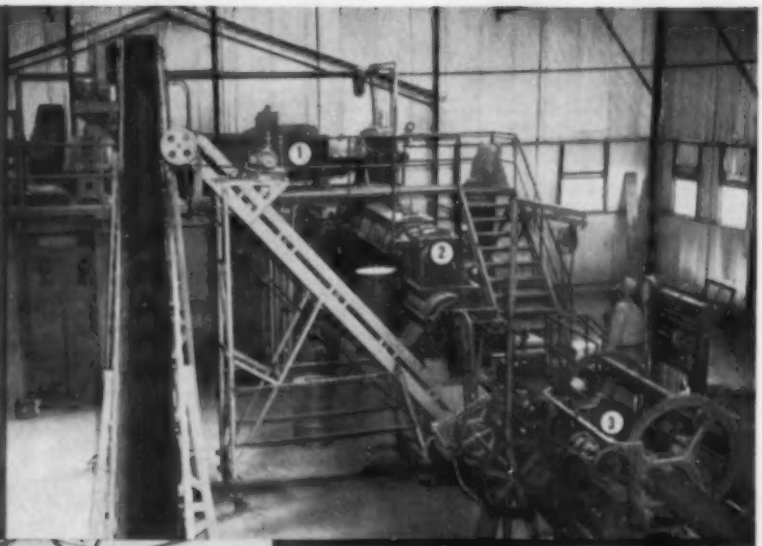

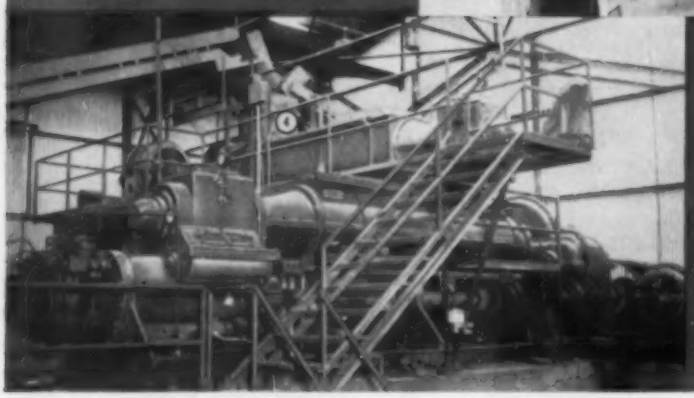

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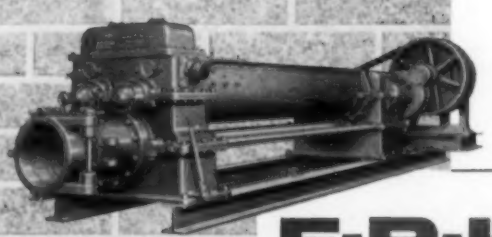

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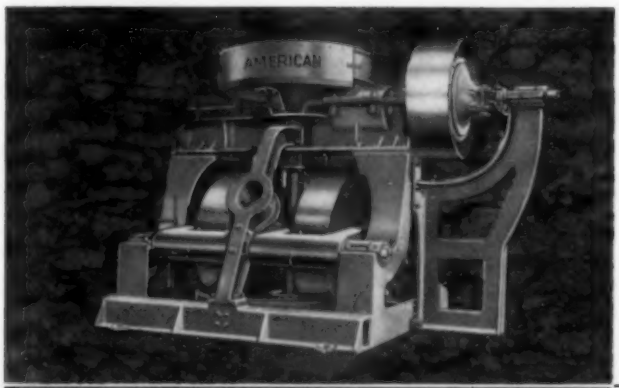

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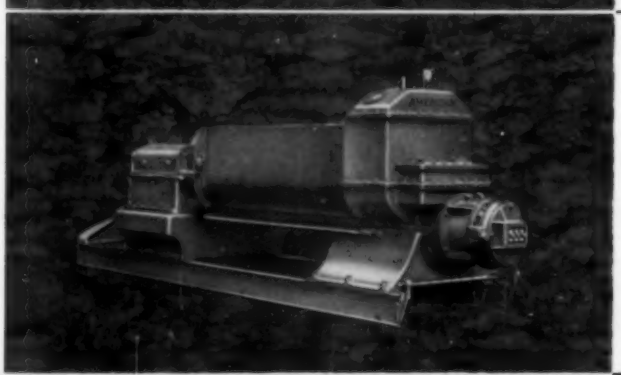

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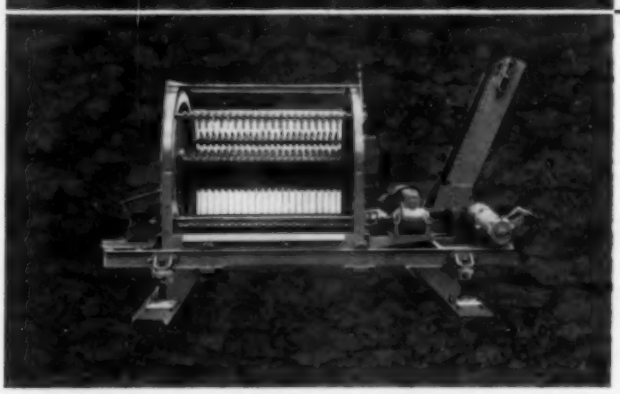

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